ENVIRONMENTAL ASSESSMENT

PINE CREEK LAND EXCHANGE

Absaroka-Beartooth Wilderness Area and Eagle Creek Area
Gallatin National Forest
Park County, Montana

Between

William & Peggy Hoppe

And the

USDA Forest Service

Gardiner Ranger District
Gallatin National Forest
Northern Region

Responsible Official:

Mary Erickson, Forest Supervisor
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P.O. Box 130, Federal Building
Bozeman, MT 59771

For further information, and send comments to:

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Chapter 1
Purpose and Need

Introduction

The Forest Service is proposing to exchange lands of approximately equal value with William and Peggy Hoppe ("Hoppe"), owners of private land in the Eagle Creek area, near Gardiner, Montana. The lands are located within the Gallatin National Forest, in Park County, Montana. See the enclosed **Vicinity Map** for the regional context of the proposed land exchange.

The exchange would result in consolidation of National Forest System lands in the Absaroka-Beartooth Wilderness and consolidation of private lands near the Hoppe's land and residence.

Terminology:
Within this EA, the following terminology will be used.

- The term "**Federal lands"** will refer to the specific parcels of National Forest System lands proposed for exchange from the United States ("U.S."). to Hoppe.

- The term "**Non-federal lands**" will refer to the specific parcels of private lands proposed for exchange from Hoppe to the U.S.

- The term "**National Forest System" or "NFS lands"** will refer to other NFS lands in the area of the exchange.

- The term "**Private lands"** will refer to the other private lands in the area of the exchange.

The Federal lands proposed for exchange from the U.S. to Hoppe consist of approximately 22.48 acres that adjoin Hoppe's private land and residence. For the past several decades, the Hoppe family has used these lands as a horse pasture, under Forest Service special use permit.

The Non-federal lands proposed for exchange from Hoppe to the U.S. consist of approximately 33.23 acres of private "in holdings" (patented mining claims) located within the Absaroka-Beartooth Wilderness near the headwaters of Pine Creek, north of Palmer Mountain.

The Forest Service has prepared this Environmental Assessment ("**EA**") to address potential environmental effects of the proposal. This EA complies with the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Council on Environmental Quality (CEQ) regulations, and Forest Service regulations to implement NEPA.

This EA is organized into five chapters.
Chapter 1 describes the purpose and need for action and the proposed action.
Chapter 2 identified issues and alternative actions. Chapter 3 describes the affected environment. Chapter 4 analyzes the environmental consequences of the alternative actions. Chapter 5 documents activities of consultation and coordination for compliance with NEPA.

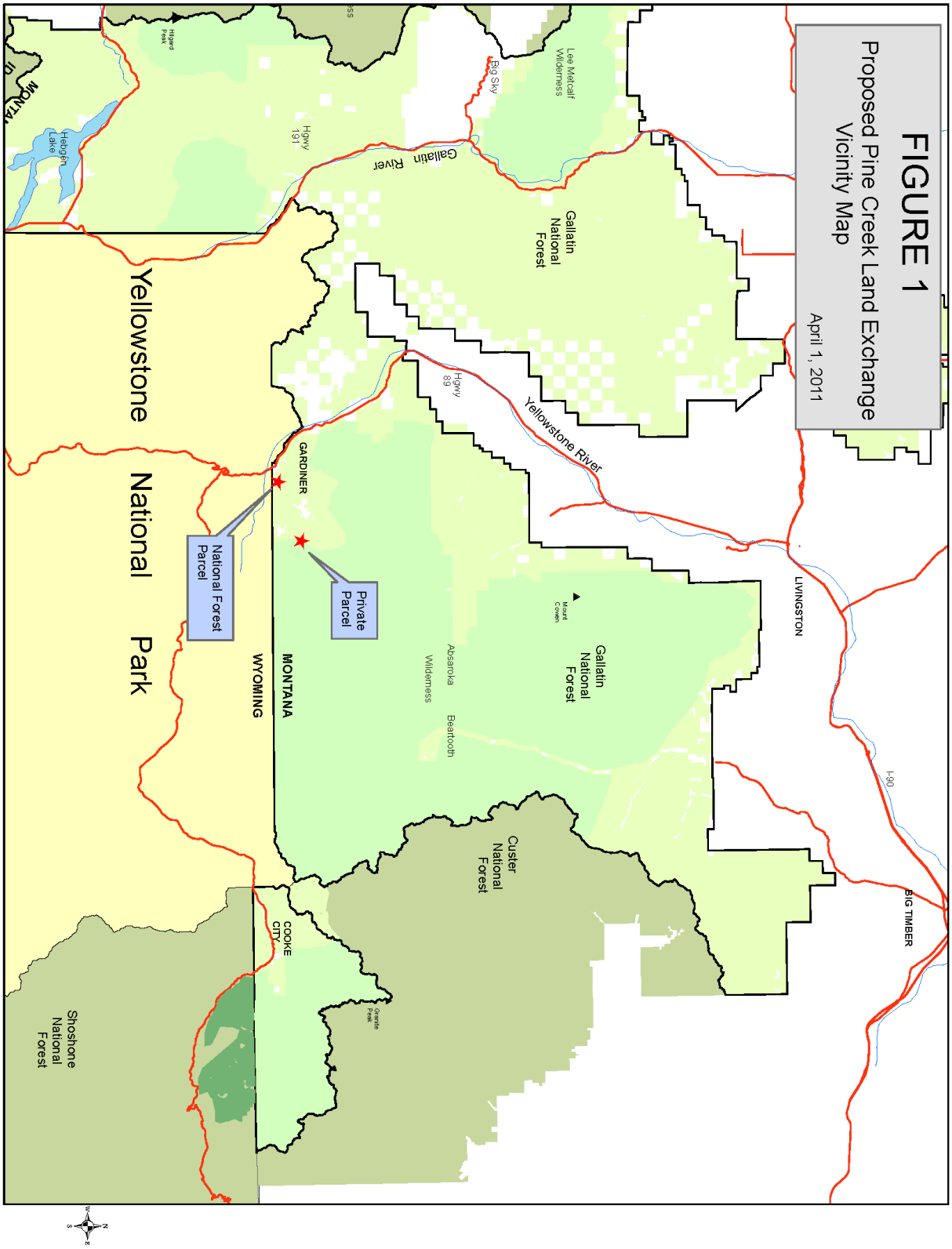
FIGURE 1
Proposed Pine Creek Land Exchange
Vicinity Map
April 1, 2011
Yellowstone National Park
Gallatin National Forest
Custer National Forest
Shoshone National Forest
Absaroka Beartooth Wildlife
Lee Metcalf Wilderness
Gallatin River
Yellowstone River
Hebgen Lake
Big Sky
Mount Cowen
Granite Peak
Highland Peak
Highway 191
Highway 89
I-90
GARDINER
COOKE CITY
LIVINGSTON
BIG TIMBER
MONTANA
WYOMING
National Forest Parcel
Private Parcel

The project file is available for review at the Gallatin National Forest Supervisor's Office at 10 East Babcock Avenue, Bozeman, Montana. To review or request information from the project file, contact Mary Maj, Gardiner District Ranger, Gallatin National Forest, 406-248-7375.

1.1. Purpose and Need for Action

The overall purpose and need for the proposed Pine Creek Land Exchange has two areas of emphasis, relating to the lands located in two separate geographic areas of the forest.

1.1.1 Pine Creek (A-B Wilderness)

In the Pine Creek area, the purpose of the proposed exchange is to acquire two Non-federal in-holdings owned by Hoppe, to consolidate NFS lands in the A-B Wilderness. This exchange would facilitate Forest Service management of the Wilderness and remove the potential for private development that would conflict with the wilderness character. This exchange would also ensure legal public use of Pine Creek Trail No. 627, which crosses the Non-federal lands.

Eagle Creek

In the Eagle Creek area, the purpose of the proposed exchange is to convey Federal lands into private ownership, with certain deed restrictions to protect resource values. The Federal lands proposed for exchange adjoin Hoppe's private land and residence.

1.2 Proposed Action

The Forest Service and Hoppe are considering the Pine Creek Land Exchange to consolidate NFS lands in the Absaroka-Beartooth Wilderness, in exchange for conveyance of lands to Hoppe, on which the Hoppe family has had a long history of use.

In this land exchange proposal, Hoppe would convey approximately 33.23 acres of Non-federal lands to the U.S. for inclusion in the A-B Wilderness. In exchange, the U.S. would convey approximately 22.48 acres of Federal lands to Hoppe. The Federal lands adjoin Hoppe's private lands and other NFS lands, two miles east of Gardiner near the Blanding Station.

Hoppe would convey all mineral rights on the Non-federal lands to the U.S. The U.S. would convey all mineral rights in its possession on the Federal lands, except for geothermal rights. The U.S. would reserve geothermal rights on the Federal lands. Other reservations and conditions of the proposed exchange are described in Section 1.2.4, Deed Restrictions.

All lands considered for exchange are located on the Gardiner Ranger District of the Gallatin National Forest, in Park County, Montana. The Non-federal lands are located approximately three miles east of Jardine, Montana, within the Absaroka-Beartooth Wilderness. The Federal lands are located approximately two air miles northeast of Gardiner. See the Vicinity Map for the regional context of the proposed land exchange.

1.2.1 Background

Pine Creek

The two Non-federal parcels were established by mining patents. The patent for the larger parcel, the Empire State Lode (MS 5572, 19.02 acres) was recorded in October 1900. The patent for the smaller parcel, the Vanity Fair Lode (MS 6985, 14.21 acres), was recorded in October 1903. These adjacent parcels together comprise a 33.23 acre in-holding in the Gallatin National Forest and the Absaroka-Beartooth Wilderness. The A-B Wilderness was designated on March 27, 1978, by an Act of Congress (P.L. 95-240). Hoppe purchased the Non-federal parcels approximately ten years ago, with the intent of transferring the lands to the U.S in exchange for approximately equal value Federal lands near his ranch and residence.

There is evidence of past mining on the Non-federal parcels, but all apparent mining activity took place well over 50 years ago, during two active periods in the 1880s and the 1930s. One mine dump, some "adits" (horizontal mine entrances) and the ruins of a cabin from these earlier mining periods are visible on the parcels (Werner 2007). All mineral rights associated with these lands would transfer to the U.S. in the proposed exchange.

Pine Creek Trail No. 627 passes through the southwestern portion of the Non-federal lands. Use of this important Forest Service trail occurs without benefit of a recorded easement. However, to date Hoppe has not posted the lands or issued any complaints against trail users.

One water right claim is associated with the Vanity Fair parcel. Water right 43B-W-194721-00 is a mining use right with a priority date of May 8, 1899. This right is currently registered with the Montana Department of Natural Resources and Conservation (DNRC) to Raymond Opperman, who sold the land proposed for exchange to Christopher Don Warner on December 13, 1993. In 1999, Warner then sold the land to Hoppe.

A review of the realty transfer certificate between Opperman and Warner concluded this water right claim was not reserved by Opperman in the sale to Warner. Therefore, according to Montana Water Law, the water right unless reserved, is appurtenant to the land on which it is used and passes to the legal owner of the property, currently Hoppe. All water rights associated with these lands would transfer to the U.S. at the closing of the exchange.

Eagle Creek

The Federal lands proposed for exchange consist of two adjacent tracts in the Eagle Creek area.

Tract 1, approximately 4.81 acres, was acquired by the U.S. in 1927, from Michael and Otillia Link, in a timber for land exchange. Michael and Otillia Link reserved ownership of the mineral rights to Tract 1. Those mineral rights remain in third party ownership, and would not transfer to Hoppe in the proposed exchange.

Tract 2, approximately 17.67 acres, was acquired by the U.S. in 1969, through condemnation from Richard and Jean Blankenship in 1969. The mineral rights associated with Tract 2 are

owned by the U.S. The U.S. would retain ownership of geothermal rights and transfer the other Federal mineral rights to Hoppe in the proposed exchange.

Two water right claims exist on the Federal lands. Water right 43B-W-59770-00 is an irrigation right with a priority date of June 6, 1881. Water right 43B-W-59775-00 is a stock water right with a priority date of February 11, 1971. Both rights would transfer to Hoppe in the exchange. The U.S. will retain water right 43B 30030914 with a priority date of June 1, 1880 (the senior right on Eagle Creek). This is also a stock water right for year round use, located on NFS land at Blanding Station, and not affected by the land exchange.

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe (by letter dated September 22, 2003) regarding the proposed exchange. The parties to the exchange agreed that when the exchange was complete, the Forest Service would terminate the Special Use Permit. However, Wayne Hoppe recently passed away. In view of this unfortunate event, the permit held by Wayne Hoppe will be terminated.

1.2.2 Goals of Proposed Action

The following are desired outcomes of the proposed Pine Creek Land Exchange:

Pine Creek

Eliminate an in-holding and consolidate NFS lands in the Absaroka-Beartooth Wilderness. Private in-holdings create difficulties for administration of the wilderness for a variety of reasons. Private development of such parcels may affect the wilderness character of the surrounding wilderness lands, and owners of private in-holdings may petition the agency administering the wilderness for access to the in-holding. For these reasons, the *Management Direction, Absaroka-Beartooth Wilderness* (USDA 1982:11) states that private lands within the wilderness will be purchased or exchanged when it becomes available.

Ensure permanent legal access for Pine Creek Trail No. 627. In the proposed land exchange, the trail segment that currently crosses Non-federal land would be consolidated into NFS land, thus resolving any possible trail access and private land trespass issues.

Eagle Creek

Provide for consolidation of private lands in the Eagle Creek area while protecting wetlands values, preventing potential exposure of susceptible cattle to brucellosis, and limiting potential development in the Eagle Creek area. Eliminate the special use permit for the horse pasture.

1.2.3 Lands Proposed for Exchange

Non-federal Lands

On the enclosed **Figure 2** (next page), the Non-federal lands are shown in purple and labeled "Private Parcel". These lands consist of two parcels totaling approximately 33.23 acres, located approximately three miles east of Jardine. The Non-federal lands lie within the Absaroka-Beartooth Wilderness, in Section 11, T9S, R9E, Park County, Montana.

Federal Lands

The Federal lands are shown in blue and labeled "National Forest Parcel" on **Figure 2**. The Federal lands consist of two tracts totaling approximately 22.48 acres, located just east of the Jardine Road, two miles northeast of Gardiner. The Federal lands are in Section 24, T9S, R8E, Park County, Montana, about one-half mile north of the boundary of Yellowstone National Park.

1.2.4 Deed Restrictions

In developing the proposed action, the Forest Service made a concerted effort to assure continued protection of private and public resources on and adjacent to the Federal lands. The following deed restrictions are proposed to provide such protection.

Bison Management: To address brucellosis concerns between wild bison, domestic bison and domestic cattle, the deeds for the Federal lands will be issued subject to a permanent restriction which constitutes a covenant running with the land, binding upon Hoppe, heirs and assigns. The restricted area may not be occupied and used by domestic bison or sexually intact cattle (for the purpose of this section, "sexually intact" means any bovine of the genus *bos* that has not been castrated or spayed or retains its capacity to sexually reproduce). This restriction does not limit occupancy and use by any other types of cattle or other livestock, including but not limited to yearling steers, spayed heifers, horses and mules.

If at some future point the brucellosis issue is resolved or the Interagency Bison Management Plan is modified to address brucellosis concerns, this deed restriction will be reviewed and may be amended by mutual agreement between the United States, acting through the Forest Supervisor of the Gallatin National Forest, and the Grantee, heirs and assigns.

Wetlands and Riparian: To protect wetlands and riparian resources, the deeds for the Federal lands will include a restriction governing the use of approximately 1.93 acres of land within 50 feet on either side of Eagle Creek for a length of approximately 840 feet. Under the deed restriction, this area may not be drained, dredged, channelized, filled, diked, or managed in any fashion so as to change the natural elements of the wetland riparian area. The deed restriction will constitute a covenant binding upon Hoppe, heirs and assigns. The Forest Service, including its authorized representatives, will reserve the right, with reasonable notice and permission, to inspect for violations of the above conditions and restrictions.

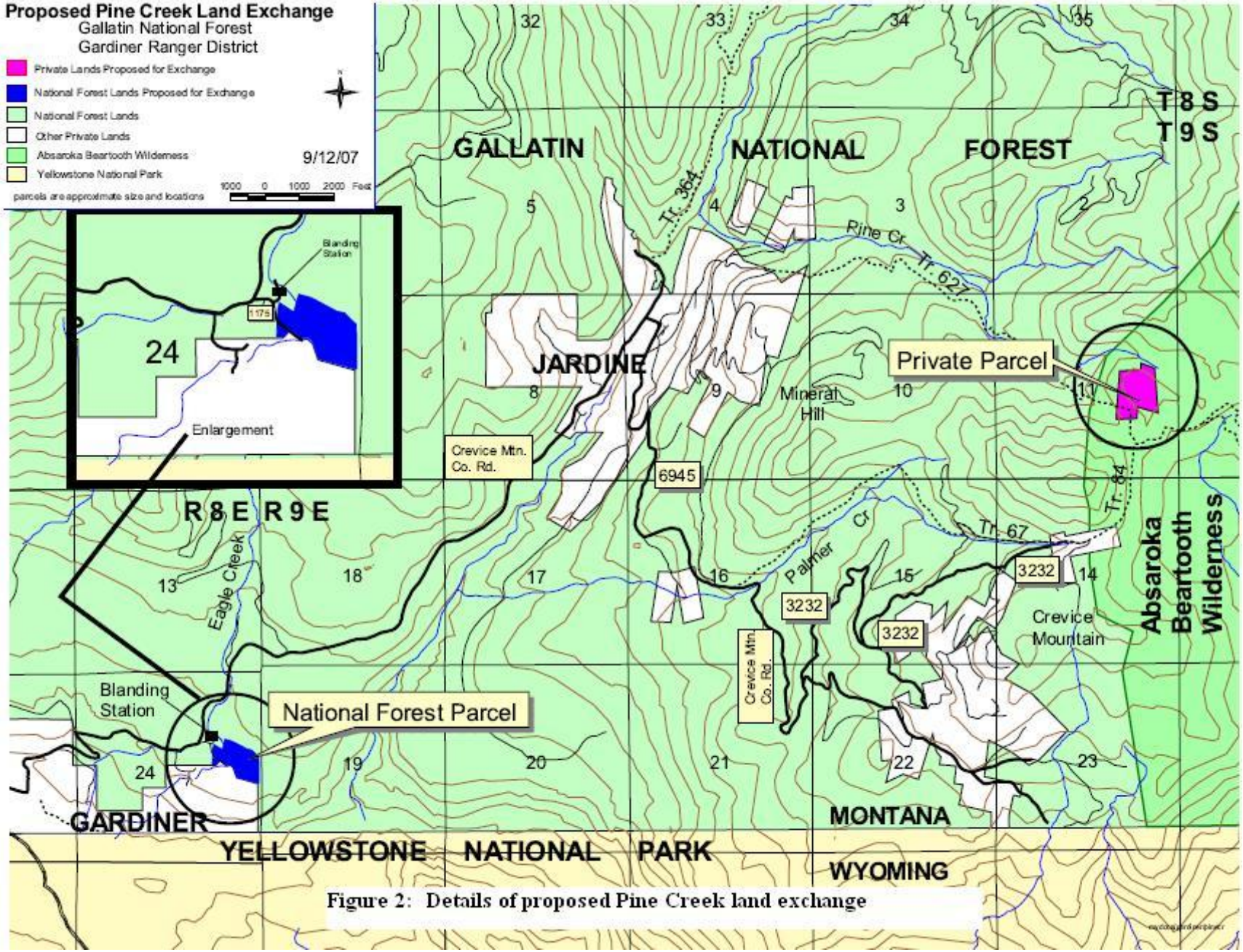

Figure 2: Details of proposed Pine Creek land exchange

Wildlife Habitat: To protect wildlife habitat, the deeds for the Federal lands will be issued subject to a permanent restriction which constitutes a covenant running with the land, binding upon Hoppe, heirs and assigns. Said deed restriction will restrict potential division of the Federal lands to not more than three (3) separate parcels. If the Federal lands are divided into two (2) parcels, no more than one single family residence can be built on each such parcel. If the Federal lands are divided into three (3) parcels, one single family residence may be built on each of any two (2) parcels, and one parcel must remain undeveloped. This deed restriction will not affect the rights of Hoppe, heirs and assigns to use the Federal lands for outfitting, ranching or other purposes. The Forest Service, including its authorized representatives, will reserve the right, with reasonable notice, to inspect for violations of the above conditions and restrictions.

1.3 Cumulative Actions

A variety of past, present, and reasonably foreseeable future actions may combine with the Proposed Action to be cumulative. Individually they could have incremental effects, and when combined with the Proposed Action, could result in cumulative environmental impacts.

The Forest Service completed an environmental analysis of the Proposed Action using a team of resource specialists involved with management of NFS lands and resources in the Pine Creek and Eagle Creek areas. The interdisciplinary team (ID Team) identified other past, present and reasonably foreseeable future actions that could combine with the Proposed Action to result in cumulative environmental impacts. In Chapter 4, the analysis of environmental consequences identifies these actions for specific issues and resources.

1.4 Management Direction in the Forest Plan

The Forest Plan for the Gallatin National Forest (1987) provides direction for management activities through identified goals, standards, guidelines, and designations of management areas (MA). More detailed discussion of specific Forest Plan direction appears below in Section 3.3.

1.5 Scope of the Proposed Action

This EA discloses environmental impacts that would occur from the entire scope of the decision to be made. Scope is defined at 40 CFR 1508.25 as the range of actions, alternatives and impacts to be considered in an EA. The scope of actions is limited to the proposed land exchange. The analysis herein is relevant to those actions (including No Action) for direct, indirect and cumulative environmental impacts. This EA is not a general land and resource management plan for the Gallatin National Forest.

Future development and use of the Federal lands proposed for exchange would be restricted in the deeds. However there are no known or anticipated plans for development of the Federal lands, and it is beyond the scope of this EA to provide further analysis on this subject. No future development is anticipated on the Non-federal lands, due to their wilderness status.

If development of facilities is proposed for any of those lands in the future, all appropriate permitting and public review will occur at that time.

This EA is tiered to the Gallatin Forest Plan (Final Environmental Impact Statement and Record of Decision, signed 9/23/87). This EA does not re-analyze Management Area (MA) allocations specified in the Forest Plan, nor does it seek to re-examine Federal regulations or Forest Service policies regarding land exchanges or land use actions.

Implementation of the Proposed Action would not specifically address future management of the acquired lands. Those decisions would be made in amendments to the Forest Plan, other Forest Plan revision procedures, or in other project-level decision procedures. In the interim, the Gallatin National Forest would manage the acquired lands consistent with Forest Plan direction for management of surrounding NFS lands. Implementation of the proposal would not establish new MAs or change travel management policy.

In consultation with the U.S. Fish and Wildlife Service (USFWS), a Biological Assessment has been completed for effects on Federally-listed threatened or endangered species.

1.6 Decision to be Made

The Forest Supervisor, Gallatin National Forest, is the Deciding Official. This EA is not a decision document. Rather, this EA discloses the environmental consequences of implementing the Proposed Action and an alternative to that action. It does not identify the alternative to be selected by the Deciding Official.

This EA serves to:

(a) Provide sufficient evidence and analysis for determining whether or not to prepare an Environmental Impact Statement (EIS) (40 CFR 1508.9(a)).

(b) Aid in informing the decision process and in complying with NEPA should it be found that an EIS is not necessary. The decision will include all elements of the Proposed Action:

- Lands included in the exchange;
- Deed restrictions to be established;
- Mitigation and monitoring measures; and
- Whether or not to implement the proposed land exchange.

A decision to implement the Proposed Action will require the Deciding Official to issue a Finding of No Significant Impact. The Decision and rationale for that decision will be stated in the Decision Notice.

1.7 Documents Incorporated by Reference

This EA incorporates by reference the following specialist reports and documents relevant to Pine Creek Land Exchange Environmental Assessment. These are available in the project file:

- Specialist Reports for the EA, October 2006 through mid 2011.
- Planning Documents for the EA, December 2008 through mid 2011.

Chapter 2
Alternatives

Introduction

Alternatives were developed in response to issues that scoping determined to be important to the decision. Scoping also identified other issues that are not important or have been covered adequately in other environmental documents. Documents related to public scoping and development of issues and alternatives are available in the project file.

2.1 Public Involvement

On May 18, 2009, the Forest Service mailed a "scoping letter" to 20 interested and/or affected individuals and organizations, to provide information about the project and solicit comment. This outreach generated six substantive public or agency comments.

The ID Team identified three important areas of concern and several minor areas of concern. Important areas of concern include: 1) Protection of wildlife habitat, particularly winter range and migratory routes for elk and bison; 2) Avoidance of transmission of brucellosis between wildlife and domestic livestock; and 3) Acquisition of private lands within Wilderness.

2.2 Important Issues

The ID team determined that two alternatives - No Action and the Proposed Action, would adequately identify and resolve any conflicts associated with the important issues:

Alternative 1 – No Action, *Do not implement the proposed land exchange*
Alternative 2 – Proposed Action, *implement the proposed land exchange*

The comparison of these alternatives led to identification of the following three important issues:

Issue 1 – Wildlife Habitat: Winter Range and Migration Routes
Issue 2 – Brucellosis: Transmission among Wildlife and Livestock
Issue 3 – Consolidation of NFS Lands within Wilderness

<u>Issue 1 – Wildlife Habitat: Winter Range and Migration Routes</u>

The Federal lands proposed for exchange are in an area used by bison and elk as both winter range and as a migration corridor between Yellowstone Park and habitats to the north in the Gallatin National Forest. Due to the importance of elk as a premier big game species and bison as a symbol of the region's natural heritage, any project affecting lands within wildlife winter range and migration routes merits a careful impact analysis.

The Federal lands have been used for domestic stock grazing and fenced since 1971. These parcels have not been actively used by elk, bison, or other large wildlife species for some time.

The effects analysis will consider this fact, and also reflect potential for limited residential development on the parcels, should the land exchange take place.

Issue 2 – Brucellosis: Transmission among Wildlife and Livestock

In the State of Montana, livestock have been certified as brucellosis-free since 1985. Although the potential for transmission of brucellosis from wildlife to livestock is low, the potential impact of new outbreaks of brucellosis in Montana livestock would have large implications on Montana's cattle industry, primarily due to reluctance of other states to allow importation of cattle from areas with known brucellosis infections (Cheville et al, 1998).

The proposed exchange would include deed restrictions on the Federal land to limit grazing to reproductively nonviable stock such as steers as an effort to prevent the spread of brucellosis to livestock. Please refer to 1.2.4 Deed Restrictions

Issue 3 – Consolidation of NFS Lands within Wilderness

Private in-holdings within Wilderness areas create potential difficulties. Development of private lands within Wilderness has the potential to detract from the naturalness of the Wilderness area. The owners of private in-holdings can petition the administering agency for access to their properties, creating further degrading wilderness character, should access roads be developed.

The proposed exchange would acquire a private in-holding within the Absaroka-Beartooth Wilderness, thus eliminating private ownership within designated Wilderness.

2.3 Minor Issues

Scoping also identified what were determined to be minor issues. This EA analyzes such issues in less detail than the important issues, because implementing either of the alternatives would either have no effect or only minor effects related to these issues. Minor issues follow:

Fire Management

There would be no substantial change in access for fire suppression with either alternative. Federal lands proposed for exchange would still provide access for emergency purposes such as wildfire response, whether in public or private ownership.

Wetlands and Floodplains

The Federal lands proposed for exchange include approximately 1.93 acres of shrub wetlands associated with Eagle Creek. There is no developed floodplain along this reach of Eagle Creek. Deed restrictions would prohibit any dredging, filling, channelizing, diking or other management within a 50 foot buffer on either side of Eagle Creek. This restricted area includes all wetlands on the parcel. Please refer to 1.2.4 Deed Restrictions

Water Quality

No effects to water quality in Eagle Creek would be likely to result from the proposed exchange, since the deed restrictions and other Federal, State and local laws and regulations would protect wetlands on the lands proposed for exchange and would prevent any development near the creek.

Fisheries

No effects to fisheries habitat or recreational fishing would be likely to result from the proposed exchange. Due to dewatering for irrigation, Eagle Creek supports very little fisheries habitat in the reach that crosses the Federal lands proposed for exchange.

Noxious Weeds – Susceptibility and Spread

According to the Gallatin Forest's invasive weeds inventory and a sensitive plants survey, the Federal lands in the Eagle Creek shows signs of intensive management for livestock grazing. No uncontrolled infestations of noxious weeds exist on the site. The Non-federal lands in the Pine Creek area are not known to support any infestations noxious weeds

Sensitive Plants

No sensitive plants or habitat suitable for such plants were identified on the Federal lands proposed for exchange during 2008 surveys (Senger and Martell 2008).

Livestock Grazing

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe (by letter dated September 22, 2003) regarding the proposed exchange. The parties to the exchange agreed that when the exchange was complete, the Forest Service would terminate the Special Use Permit. However, Wayne Hoppe recently passed away. In view of this unfortunate event, the permit held by Wayne Hoppe will be terminated.

Although the Forest Service Special Use Permit would terminate, horse grazing on the Federal lands exchanged to Hoppe would likely continue to occur.

No livestock grazing occurs on the Non-federal lands proposed for exchange.

Cultural Resources

The Forest Service conducted an archeological survey of the Federal lands. No cultural or archeological resources were identified on or near the Federal lands proposed for exchange.
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Public Access

The Non-federal lands would be legally accessible to the public using Pine Creek Trail No. 627.

Mineral Potential and Risk of Development

According to the Mineral Report completed Sept 7, 2011 by Peter Werner, Forest Mining Engineer for the Gallatin National Forest, the following was determined.

The mineral potential and risk of development for the Non-federal lands has low potential for leasable or saleable minerals and a high potential for the discovery of locatable minerals.

There is a high probability of finding locatable minerals (placer gold deposits) on the Federal lands, but the likelihood of commercially exploitable deposits is low. The potential for leasable minerals is considered to be low.

The Mineral Report recommends the Forest Service proceed with the proposed land exchange. (Werner, 2007)

Hazardous Materials Inspection and Clearance

No evidence of hazardous materials was found on any of the Federal or Non-federal lands considered for exchange (White 2006). This report has been updated and will have an effective date of 2011, pending a final field inspection by Dale White.

2.4 Alternatives Considered in Detail

The ID Team determined that two alternatives, No Action and the Proposed Action, would adequately identify and resolve conflicts associated with important issues:

- **Alternative 1 – No Action -** *Do not implement proposed land exchange.*
- **Alternative 2 – Proposed Action -** *Implement the proposed land exchange*

These two alternatives were determined to be adequate because: (a) the significance of environmental issues could be minimized through application of mitigation and design features to the Proposed Action, and (b) the effects can be adequately understood through comparison of the Proposed Action and No Action alternatives.

2.4.1 Alternative 1 – No Action - *Do Not Implement Proposed Land Exchange*

This alternative is required by NEPA (40 CFR 1500-1508) and represents reasonably foreseeable conditions that would be expected in the absence of the proposed land exchange. Alternative 1 would not change the existing land ownership in the Pine Creek or Eagle Creek areas.

Alternative 2 – Proposed Action - *Implement the Proposed Land Exchange*

Alternative 2 would implement the Proposed Action, which was developed to meet the purpose and need for action described in Chapter 1. This alternative implements an exchange of lands between the Forest Service and Hoppe to consolidate NFS lands in the Pine Creek area of the Absaroka-Beartooth Wilderness. The Forest Service presented this alternative as the Proposed Action during public scoping in 2009.

The Proposed Action includes the following components:

Land Exchange:

Hoppe would exchange to the U.S., for inclusion in the Gallatin National Forest, a total of approximately 33.23 acres of Non-federal lands, consisting of two adjacent parcels (patented mining claims). The lands are located approximately 3 miles east of the town of Jardine, within the Absaroka-Beartooth Wilderness, in Section 11, T9S, R9E, Park County, Montana.

In exchange, the U.S. would convey to Hoppe a total of approximately 22.48 acres of Federal land, consisting of two adjacent tracts. The Federal lands are located just south of Jardine Road, two miles east of Gardiner, in Section 24, T9S, R8E, Park County, Montana. The lands are one-half mile of the northern boundary of Yellowstone National Park.

Water Rights:

Federal Lands: Two water right claims are appurtenant to the Federal lands.

Water Right Number: 43B-W-59770-00
Point of Diversion: S ½ NE ¼ of T9S, R8E, Section 24
Place of Use: S ½ NE ¼ of T9S, R8E, Section 24
Purpose: Irrigation
Maximum Flow Rate: 1.00 cubic feet per second (cfs)
Priority date: June 6, 1881
Source: Unnamed Tributary of Eagle Creek
Period of Use: April 1 to November 19

Water right 43B-W-59770-00 will transfer to Hoppe upon completion of the land exchange. The source for this water right is listed incorrectly and should be Eagle Creek. Upon completion of this exchange, Hoppe may elect to correct the source by petitioning the Montana State Water Court. The U.S. will provide Hoppe with a DNRC form 625, Correction of Water Right Record, to complete this task.

Water Right Number: 43B-W-59775-00
Point of Diversion: SE ¼ SE ¼ NE ¼ of T9S, R8E, Section 24
Place of Use: SE ¼ SE ¼ NE ¼ of T9S, R8E, Section 24
Purpose: Stock
Maximum Volume: 30 gallons per day per animal unit

Priority Date: February 11, 1971
Source: Eagle Creek
Period of Use: June 1 to October 31

Water right 43B-W-59775-00 will transfer to Hoppe upon completion of the land exchange.

The U.S. will retain Claim Number 43B 30030914 which has a priority date of June 1, 1880 (the senior right on Eagle Creek). This is a stock water right for year round use, located on National Forest System land at Blanding Station, and not affected by the land exchange.

Non-federal Lands: One water right claim is appurtenant to the Non-federal lands.

Water Right Number: 43B-W-194721-00
Point of Diversion: NW ¼ SE ¼ NE ¼ of T9S, R9E, Section 11
Place of Use: SW ¼ NE ¼ SE ¼ of T9S, R9E, Section 11
Purpose: Mining
Maximum Flow Rate: 10 gallons per minute (GPM)
Priority Date: May 8, 1899
Source: Spring, Unnamed tributary of Pine Creek
Period of Use: June 1 to December 4

Water right 43B-W-194721-00 will transfer to the U.S. upon completion of the land exchange. This water right is currently registered with the Montana Department of Natural Resources and Conservation (DNRC) to Raymond F. Opperman, who sold the land to Christopher Don Warner on December 13, 1993. In 1999, Warner then sold the land to Hoppe.

A review of the realty transfer certificate between Opperman and Warner concluded this water right was not reserved by Opperman in the sale to Warner. Therefore, according to Montana Water Law, the water right unless reserved, is appurtenant to the land on which it is used and passes to the legal owner of the property, currently Hoppe. Upon completion of the exchange the U.S. will complete and file a Water Right Ownership Update Fee Log Sheet with the DNRC to document current ownership.

Minerals:

In the exchange, Hoppe would convey all mineral rights associated with the Non-federal lands to the U.S. The U.S. would retain geothermal rights associated with the Federal lands, and convey all other mineral rights owned by the U.S. to Hoppe. The third party mineral ownership affecting one portion of the Federal lands would not change.

Livestock Area Special Use Permit:

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe (by letter September 22, 2003) regarding the proposed exchange. The parties to the exchange agreed that when the exchange was complete, the Forest Service would terminate the Special Use Permit. However, Wayne Hoppe recently passed away. In view of this unfortunate event, the permit held by Wayne Hoppe will be terminated.

By agreement, within one year after completion of the proposed exchange, Hoppe would move all fencing and any other pasture facilities that are "off-line" (located on NFS lands outside of the Federal lands identified for exchange) onto the new private property boundary.

Deed Restriction for Protection of Wetlands:

For protection of wetlands and native trout populations, and pursuant to the authority contained in Executive Order 11990 of May 24, 1977, the deeds for the Federal lands would be issued subject to a restriction which constitutes a covenant running with the land, binding upon Hoppe, heirs and assigns, for protection of approximately 1.93 acres of land, including all the site wetlands, 100 feet in width, 50 feet on either side of Eagle Creek, extending for a length of approximately 840 feet through the Federal land. Any use of these wetlands must comply fully with applicable Federal, State and local regulations. The U.S, by its authorized representatives and assigns, will reserve the right to inspect for violations of this restriction.

Deed Restriction to Reduce Conflicts Between Livestock and Bison:

To address brucellosis concerns between wild bison, domestic bison and domestic cattle, the deeds for the Federal lands will be issued subject to a permanent restriction which constitutes a covenant running with the land, binding upon Hoppe, heirs and assigns. The restricted area may not be occupied and used by domestic bison or sexually intact cattle (for the purpose of this section, "sexually intact" means any bovine of the genus *bos* that has not been castrated or spayed or retains its capacity to sexually reproduce). This restriction does not limit occupancy and use by any other types of cattle or other livestock, including but not limited to yearling steers, spayed heifers, horses and mules.

If at some future point the brucellosis issue is resolved or the Interagency Bison Management Plan is modified to address brucellosis concerns, this deed restriction will be reviewed and may be amended by mutual agreement between the United States, acting through the Forest Supervisor of the Gallatin National Forest, and the Grantee, heirs and assigns.

Deed Restriction to Protect Wildlife Habitat:

To protect wildlife habitat, the deeds for the Federal lands will be issued subject to a permanent restriction which constitutes a covenant running with the land, binding upon Hoppe, heirs and assigns. Said deed restriction will restrict potential division of the Federal lands to not more than three (3) separate parcels. If the Federal lands are divided into two (2) parcels, no more than one single family residence can be built on each such parcel. If the Federal lands are divided into three (3) parcels, one single family residence may be built on each of any two (2) parcels, and one parcel must remain undeveloped. This deed restriction will not affect the rights of Hoppe,

heirs and assigns to use the Federal lands for outfitting, ranching or other purposes. The Forest Service, including its authorized representatives, will reserve the right, with reasonable notice, to inspect for violations of the above conditions and restrictions.

2.5 Alternatives Considered and Eliminated from Detailed Analysis

Forest Service policy for land exchanges requires consideration of a direct purchase alternative (FSH 5409.13). This alternative was considered, but not evaluated in detail. Hoppe has no interest in selling land to the U.S., only in exchanging the Non-federal lands for the Federal lands adjacent to his private land (see letter from Hoppe, Appendix A). No other alternatives were considered, as the Proposed Action fully addresses the purpose and need for action, and no other action available to the Forest Service would do so.

2.6 Mitigation Measures

Forest resource specialists identified mitigation measures to provide appropriate avoidance, minimization, restoration, elimination, or compensation for impacts (40CFR 1508.2). Mitigation measures are presented below for relevant issues and National Forest resources.

2.6.1 Mitigation for Issue 2 – Brucellosis

The deed restriction that would prohibit grazing by cows or cow-calf pairs on the Federal lands (see description above under Section 2.4.2) was included in the proposed exchange to mitigate potential transmission of Brucellosis between wild bison and reproductively viable livestock.

2.6.2 Mitigation for Wetlands Protection

The Federal lands in the Eagle Creek area contain approximately 1.93 acres of wetlands. The Non-federal lands in the Pine Creek area contain approximately 0.12 acre of wetlands (Story 2009). This imbalance is contrary to Forest Service policy. FSM 2527 directs that the value of wetlands and floodplains must be equal, both qualitative and quantitative in land exchanges. Should wetland and floodplains value in the Federal lands being exchanged exceed those of the Non-federal lands being acquired, the exchange can proceed providing the exchange clearly benefits the National Forest and potential adverse impacts to the floodplains and wetlands to be conveyed must be clearly protected so that no net loss of floodplain and wetlands occurs.

The hydrology report indicates that no floodplains will be affected by this exchange. To ensure no loss of wetland values, the deed restriction for protection of wetlands, described above in Section 2.4.2, as **Deed Restriction to Protect Open Space and Wildlife Habitat** provides permanent protection of wetlands on the Federal lands.

Chapter 3
Affected Environment

Introduction

Chapter 3 begins with a general description of the lands considered for exchange, and the regulatory setting. This is followed by a description of the various biological, physical, social, economic and regulatory conditions of interest for the lands considered for exchange.

3.1 Analysis Area

The analysis area includes the Federal and Non-federal lands considered for exchange and the adjacent NFS and private lands within one mile distance.

3.2 Location

The lands considered for exchange are located in two areas of the Gallatin National Forest:

- Eagle Creek area, located two miles east of Gardiner;
- Pine Creek area, located within the A-B Wilderness.

All lands are on the Gardiner Ranger District, in Park County, Montana.

3.2.1 Federal Lands

The Federal lands are located east of Gardiner, and approximately one-half mile north of the boundary of Yellowstone National Park. This site is approximately 52 miles miles south of Livingston, Montana. Access to the Federal lands is via U.S. Highway 89 to Jardine Road, to Blanding Station Road No.1175, a National Forest road.

The Federal lands total approximately 22.48 acres and consists of two adjacent tracts, as shown in blue on Figure 1. This land is located on Eagle Creek in Section 24, T9S, R8E, in Park County. The Federal lands are bordered by private lands to the south, and NFS lands to the east, north and west. Blanding Station, a former ranger station and horse barn, adjoins the Federal lands to the northwest.

The Federal lands consist of sagebrush grasslands and open meadow with some shrub wetlands. Eagle Creek flows through the site. Elevations range from 5,800 to 6,000 feet. The Federal lands are currently used as a horse pasture, and shows signs of having been grazed for many years. The pasture fencing closely approximates the surveyed boundaries of the Federal lands proposed for exchange.

3.2.2 Non-federal Lands

In exchange for the Federal lands described above, Hoppe would exchange to the U.S., for inclusion in the Gallatin National Forest, a total of approximately 33.23 acres of Non-federal land consisting of in two adjoining parcels in Section 11, T9S, R9E, in Park County. This Non-federal land is an in-holding in the A-B Wilderness, and is entirely surrounded by NFS lands. Pine Creek Trail No. 627, a Forest Trail, crosses these parcels of land. Access to the Non-federal lands is via Jardine Road to the Pine Creek Trail No. 627, then easterly to the Non-federal lands.

The Non-federal lands in the Pine Creek area are mostly steep alpine uplands, densely forested with Douglas-fir and lodgepole pine. The sites were patented as mineral claims, and were actively mined in the 1880s and 1930s. Some evidence of past mining, including a mine dump, a few adits, and the ruins of a cabin, are still present. Elevations range from 8,000 to 8,500 feet.

3.3 Forest Plan Direction

Direction for management of the Gallatin National Forest is contained in the Forest Plan. The Forest Plan is available in the project file. The Forest Plan sets forest-wide goals and objectives, standards and guidelines.

The Forest Wide Standard for Land Ownership includes these standards for land exchanges:

- In land for land exchanges, the first priority is given to acquiring private lands within designated Wilderness (II-25, 12(a) 4 (a)).

- In land for land exchanges, lands may be disposed of when not needed for accomplishing Forest objectives (II-25 & 26, 5 (c)).

The Pine Creek Land Exchange is consistent with these Forest Plan goals and objectives:

- Manage National Forest lands in their present ownership patterns except where opportunities arise to accomplish specific objectives (II-2, A (19)).
- Land ownership adjustments will be made when analysis shows them to be advantageous to the public (II-6, k).
- Exchange, donation, purchase, and easement authority will be used to meet ownership adjustment needs (II-25, 12(3)).
- Private land within the wilderness will be purchased or exchanged as it becomes available (p. F-11, # 10.).

Following exchange to the U.S., the Non-federal lands would be managed as part of the Absaroka- Beartooth Wilderness. Following exchange of the Federal lands to Hoppe, the lands would likely continue to be used by Hoppe as a horse pasture, with potential for development of two home sites in the future.

The Forest Plan provides guidance for management of specific land areas, referred to as Management Areas (MAs). Forest Plan MA direction for the Federal lands considered for exchange, and for the NFS lands adjacent to the Non-federal lands, is summarized below.

3.3.1 Federal Lands

The Forest Plan designates a single MA for the Federal lands: **MA 26** – Ranger Stations, work centers and other administrative sites located within Forest boundaries (III-71).

3.3.2 Non-federal Lands

The Forest Plan designates one MA for the NFS lands surrounding the Non-federal lands: **MA 4** – Wilderness areas. Until a Forest Plan revision or amendment is completed, the Non-federal lands in the exchange would be managed consistent with adjacent NFS lands. Management goals for MA 4 include managing lands consistent with the Wilderness Act of 1964 to protect wilderness character and managing grizzly bear habitat for recovery of the grizzly bear (III-10).

3.4 Wilderness

3.4.1 Laws, Regulations, Policy and Direction

Wilderness (Issue 3)

The Wilderness Act of 1964 (P.L. 88-577) established the National Wilderness Preservation System, a network of public lands set aside in their natural condition as an "*area where the earth and its community of life are untrammeled by man…";* wilderness retains "*its primeval character and influence, without permanent improvements"*, which is to be "*managed so as to preserve its natural conditions…"*; wilderness "*generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable…".* It also has outstanding opportunities for solitude or a primitive and unconfined type of recreation.

Congress can designate a suitable area of public land as Wilderness. The Absaroka-Beartooth ("A-B") Wilderness was established on March 27, 1978 by Act of Congress, Public Law 95-240. This Act set aside almost 1,000,000 acres on the Gallatin, Custer, and Shoshone National Forests as part of the National Wilderness Preservation System. In designating the A-B Wilderness, Congress assured this enduring wilderness resource would be secured for the American people of present and future generations.

The Gallatin Forest Plan includes this goal: "Manage existing and recommended wilderness resource to maintain its wilderness character and provide for its use and protection" (1987: II-1).

3.4.2 Affected Environment

The following summary of wilderness potential of the lands proposed for exchange is based upon the Recreation Specialist Report for the Pine Creek Land Exchange (Dale 2009).

Federal Lands

The Federal lands proposed for exchange to Hoppe are outside of any designated Wilderness, Wilderness Study Area or "Roadless Area". The Federal lands have very little wilderness character in their existing condition, as there are several residences on adjacent land to the south.

Non-federal Lands

The Non-federal lands are private in-holdings within the A-B Wilderness. The current condition of these lands is consistent with wilderness character. No roads cross the lands; dense forest, terrain and distance from developed areas provide solitude; and the only human artifacts on the site are a primitive trail and artifacts of mining that occurred more than 70 years ago.

3.5 Geology and Minerals

3.5.1 Laws, Regulations, Policy, and Direction

The Bureau of Land Management (BLM) Manual 3060.11 requires that all Non-federal and Federal lands identified for acquisition or conveyance by the U.S. have a mineral assessment documented in a mineral report. The mineral report should document the mineral potential of the Federal land, evaluate surface uses that would interfere with potential development of the mineral estate, and recommend action that should be taken toward disposal or retention of the Federal mineral estate.

The Forest Service Handbook guidance on land exchanges advises that creation of "split estates" in which different entities own the surface land and the underlying mineral rights is generally inadvisable. Split estates may be created in land exchanges if the Forest Service determines that it is in the public interest to acquire the property without the mineral estate. This determination shall be documented in the mineral report and disclosed in the NEPA analysis and decision document (FSH5409.13 chapter 33.43f 2).

3.5.2 Affected Environment

The following summary of mineral potential of the lands proposed for exchange is based upon the Mineral Report prepared for the Pine Creek land exchange (Werner 2007).

Federal Lands

The Federal lands were determined to have minimal potential for the discovery of an economically viable leasable or saleable mineral deposit, based on unfavorable geology and the lack of prior mineral development. The likelihood of finding locatable mineral resources, placer deposits of gold, determined to be high. This is based on records of placer gold having been identified on the site in the past. The level of certainty for all resource evaluations can be assigned a Certainty Level of "C", corresponding to there being a minimum of quantitative direct evidence such as past mining or exploration activity to support such a designation.

The mineral potential analysis of the Federal tracts is based on a field investigation, a review of the Federal minerals database, historical records, and applicable geologic literature. The evaluation is based largely on previous geologic evaluations and a filed investigation.

The mineral rights to one parcel of the Federal lands, **Tract 1**, approximately 4.81 acres, are owned by third party and would not transfer to Hoppe in the proposed exchange.

Non-federal lands

The Non-federal lands have minimal potential for the discovery of an economically viable leasable or saleable mineral deposit, based on unfavorable geology and the lack of prior mineral development. The likelihood of finding locatable mineral resources, placer deposits of gold, was determined to be high. This is based on records of placer gold having been identified on the site in the past and recording of mineral claims to the lands. The level of certainty for all resource evaluations can be assigned a Certainty Level of "C", meaning there is minimal quantitative direct evidence such as past mining or exploration activity to support such a designation.

In the exchange, the Forest Service will acquire all minerals in the Non-federal land.

3.6 Wetlands, Floodplains, and Riparian Areas

3.6.1 Laws, Regulations, Policy, and Direction

The regulations implementing *Section 404 of the Clean Water Act* define wetlands as:

> *Those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas* (33 CFR 328.3).

Executive Order 11990 directs Federal agencies involved in acquiring, managing or exchanging Federal lands to minimize destruction, loss or, degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

The Forest Service Handbook directs that the value of wetlands and floodplains must be in balance in land exchanges. Where wetland/floodplains values on the Federal lands exceeds the value on the Non-federal lands, the exchange can proceed provided the exchange is clearly to the benefit to the National Forest and potential adverse impacts to floodplains/wetlands on the Federal lands to be conveyed is clearly protected so that floodplain and wetland functions are not reduced by the exchange (FSH 5409.13, 33.43c).

The regulations implementing *Section 404 of the Clean Water Act* define Riparian Areas as:

> *Lands adjacent to streams, rivers, lakes, and estuarine-marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality* (33CFR 332.2).

The Forest Plan (1987) contains forest-wide standards to manage key migratory bird habitat components such as snags and down woody debris, cliffs, caves and riparian areas, and habitat for waterfowl, shorebirds and wading birds. The Gallatin Forest Travel Management Plan (2006) contains forest-wide direction (goals, objectives, standards and guidelines) including specific measures designed to minimize impacts on wildlife and rare habitats, including riparian habitats.

3.6.2 Affected Environment

The following summary of wetland, floodplain, and riparian resources of the lands proposed for exchange is based upon the Pine Creek Land Exchange Wetland-Floodplain Report (Story 2009)

Federal lands

Based on numerous site visits to the area, the Federal tracts proposed for exchange contain an estimated 1.1 acres of riverine wetland (Cowardin 1979) along Eagle Creek. This wetland, which is basically a riparian area, with soil moisture augmented by Eagle Creek, supports deciduous shrubs (mainly willows and alders) along Eagle Creek. The wetland/riparian area averages 57 feet wide and 840 feet long. Flowing stream width was consistently measured at 2 feet and active channel width from 4 to 8 feet. Eagle Creek is too small and dewatered by irrigation diversions to have a quantifiable geomorphic floodplain. The Federal tracts are heavily grazed and show evidence of stream bank trampling and lateral channel expansion - particularly in segments which do not have riparian shrubs on the stream bank.

Non-federal lands

The Non-federal lands contains 0.12 acre of riverine wetlands along its northwest corner.

Overall, the exchange would convey approximately 1.1 acres of wetlands into private ownership, and convey approximately 0.12 acre of wetlands into NFS status. As is discussed above in Section 2.4.2, a deed restriction protecting the wetlands and riparian area within a 50-foot on either side of Eagle Creek will compensate for a reduction of wetlands area in NFS lands.

3.7 Water Rights

3.7.1 Laws, Regulation, Policy and Direction

The Forest Service Handbook directs that a water rights analysis be completed to address ground or surface water rights associated with the Federal and non-federal lands (FSH 5409.13, 32.45).

3.7.2 Affected Environment

The following summary of water rights of the lands proposed for exchange is based upon the Pine Creek Land Exchange Water Rights Analysis (Hancock 2010).

Federal lands

Two water right claims are appurtenant to the Federal lands proposed for exchange.

(1) Water Right Number: 43B-W-59770-00
Point of Diversion: S ½ NE ¼ of T9S, R8E, Section 24
Place of Use: S ½ NE ¼ of T9S, R8E, Section 24
Purpose: Irrigation
Maximum Flow Rate: 1.00 cubic feet per second (cfs)
Priority date: June 6, 1881
Source: Unnamed Tributary of Eagle Creek
Period of Use: April 1 to November 19

Water right 43B-W-59770-00 will transfer to Hoppe upon completion of the land exchange. The source for this water right is listed incorrectly and should be Eagle Creek. Upon completion of this exchange, Hoppe may elect to correct the source by petitioning the Montana State Water Court. The U.S. will provide Hoppe with a DNRC form 625, Correction of Water Right Record, to complete this task.

(2) Water Right Number: 43B-W-59775-00
Point of Diversion: SE ¼ SE ¼ NE ¼ of T9S, R8E, Section 24
Place of Use: SE ¼ SE ¼ NE ¼ of T9S, R8E, Section 24
Purpose: Stock
Maximum Volume: 30 gallons per day per animal unit
Priority Date: February 11, 1971
Source: Eagle Creek
Period of Use: June 1 to October 31

Water right 43B-W-59775-00 will transfer to Hoppe upon completion of the land exchange.

The U.S. will retain water right number 43B-30030914 which has a priority date of June 1, 1880 (the senior right on Eagle Creek). This is a stock water right for year round use, located on National Forest System land at Blanding Station, and not affected by the land exchange.

Non-federal lands

One water right claim is appurtenant to the Non-federal lands proposed for exchange.

(1) Water Right Number: 43B-W-194721-00
Point of Diversion: NW ¼ SE ¼ NE ¼ of T9S, R9E, Section 11
Place of Use: SW ¼ NE ¼ SE ¼ of T9S, R9E, Section 11
Purpose: Mining
Maximum Flow Rate: 10 gallons per minute (GPM)
Priority Date: May 8, 1899
Source: Spring, Unnamed tributary of Pine Creek
Period of Use: June 1 to December 4

Water right 43B-W-194721-00 will transfer to the U.S. in the proposed land exchange. This water right is currently registered with the Montana Department of Natural Resources and Conservation (DNRC) to Raymond F. Opperman who sold the land to Christopher Don Warner on December 13, 1993. In 1999, Warner then sold the land to Hoppe. A review of the realty transfer certificate between Opperman and Warner concluded this water right was not reserved by Opperman in the sale to Warner. Therefore, according to Montana Water Law, the water right unless reserved, is appurtenant to the land on which it is used and passes to the legal owner of the property, currently Hoppe. Upon completion of the exchange the Forest Service will file a Water Right Ownership Update Fee Log Sheet with Montana DNRC to document current ownership.

3.8 Fisheries

3.8.1 Laws, Regulations, Policy, and Direction

The NFMA requires Federal agencies to provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives (16 USC 1604(g)(3)(B)). The Endangered Species Act (ESA) mandates that Federal Agencies such as the Forest Service ensure that any action authorized is not likely to jeopardize the continued existence of Federally listed threatened or endangered species (50 CFR 402 Section 7). FSM 2670.32 requires that the Forest Service avoid or minimize impacts to Sensitive Species. If impacts cannot be avoided, the agency must analyze the significance of potential adverse effects on sensitive species populations or habitat within the area of concern.

The Forest Plan includes these goals: "*Maintain and enhance fish habitat to provide for increased fish population,"* and *"Provide for a broad spectrum of recreation opportunities in a variety of Forest settings"* (1987:II-1).

3.8.2 Affected Resource

The following summary of fisheries resources of the lands proposed for exchange is based on the report Final Aquatic Effects Report – Pine Creek Land Exchange (Shuler 2009). The fisheries resource also includes recreational access to fishable waters.

Federal lands

Approximately 840 feet of Eagle Creek is within the Federal lands proposed for exchange. Eagle Creek is a small third order tributary to the Yellowstone River. The stream has several irrigation diversions and is dewatered prior to its confluence with the Yellowstone River. Average channel width through the Federal lands is approximately two feet. Small stream size and low flows limit habitat availability throughout the Federal parcel proposed for exchange. Riparian vegetation consists primarily of dense deciduous shrubs that inhibit or preclude access. Short stream segments with no shrub component are interspersed throughout the reach.

Fish population surveys were conducted during spring 2008 and summer 2009 to determine fish species assemblages and population characteristics. During a 2008 electro-fishing survey of the entire reach of Eagle Creek within the parcel, no fish were found. Another 100-foot reach upstream of the Blanding Station was surveyed and one hybrid cutthroat 125 millimeters (4.9 inches) in length was captured. In July 2009, a 325-foot reach upstream of the Blanding Station, upstream of the Federal parcel offered for exchange, was surveyed and seven rainbow/cutthroat trout hybrids averaging 145 millimeters (5.6 inches) were found. All fish had physical traits indicating significant hybridization.

Fish densities and suitable habitat increase further upstream above Jardine Road and irrigation diversions. At this point Eagle Creek provides limited recreational fishing. DNA testing of fish captured in Eagle Creek above the Eagle Creek campground in 1988 showed significant hybridization. The Eagle Creek watershed upstream of Jardine Road, including Davis Creek, has suitable habitat for Yellowstone cutthroat trout, which is considered a *Species of Special Concern* by the Montana Fish, Wildlife, and Parks Department (MFWP) and a *Sensitive Species* by the Forest Service. However, because of significant hybridization of native trout with introduced species, Eagle Creek is not considered a conservation population and there are currently no plans to restore native fish in the drainage.

Small stream size, limited access due to dense deciduous vegetation, low fish densities and small fish size throughout the reach of Eagle Creek in the Federal parcel proposed for exchange precludes recreational fishing opportunities.

Non-federal lands

There are no perennial, fish-bearing streams within the Non-federal lands.

3.9 Wildlife (Issue 1)

3.9.1 Laws, Regulations, Policy, and Direction

The NFMA requires Federal agencies to provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives (16 USC 1604(g)(3)(B)). The ESA mandates that Federal Agencies such as the Forest Service ensure that any action authorized is not likely to jeopardize the continued existence of Federally listed threatened or endangered species (50 CFR 402 Section 7). FSM 2670.32 requires that the Forest Service avoid or minimize impacts to Sensitive Species. If impacts cannot be avoided, the agency must analyze the significance of potential adverse effects on sensitive species populations or habitat within the area of concern. The Migratory Bird Treaty Act (16 USC 703-712) implements various treaties and conventions for the protection of migratory birds. Presidential Executive Order 13186 requires agencies to ensure that environmental analyses evaluate the effects of Federal actions and agency plans on migratory birds, with emphasis on species of concern.

The Forest Plan contains goals to provide habitat for viable populations of all indigenous wildlife species, provide sufficient habitat for recovered populations of threatened and endangered species, to prevent any human-caused grizzly bear losses, and maintain or improve forage resources (II-1). Forest Plan objectives include management of wildlife habitat to emphasize forage and cover needs on big game winter range, providing for vegetative diversity in order to meet the needs of non-game and small game species, and maintenance of adequate security habitat for big game through management of hiding cover and roads (II-4). Forest-wide standards include coordinating management of wildlife resources with private landowners; managing big game winter range to meet forage and cover needs and to provide for increases in elk and deer populations; emphasizing management of special and unique wildlife habitat features such as wallows, licks, and riparian areas; maintaining essential habitat for sensitive species; and evaluating potential impacts to threatened and endangered species; and consulting with the US Fish and Wildlife Service when necessary (II-18).

A Forest Plan Amendment for the Canada lynx provides specific direction based on a conservation strategy for this species. The Lynx Amendment (Number 46) incorporates conservation measures from the Northern Rockies Lynx Management Direction (NRLMD) FEIS into the Forest Plan.

Direction contained in the NRLMD pertinent to this proposal includes the following:

- Objective ALL O1: Maintain or restore lynx habitat connectivity within and between LAUs and in linkage areas.
- Guideline HU G7: New permanent roads should not be built on ridge tops or saddles, or in areas identified as important for lynx habitat connectivity.
- Objective LINK O1: In areas of intermingled land ownership, work with landowners to pursue conservation easements, habitat conservation plans, land exchanges, or other solutions to reduce the potential of adverse impacts on lynx and lynx habitat.
- Guideline LINK G1: NFS lands should be retained in public ownership.

3.9.2 Affected Environment

The following summary of wildlife and habitat resources of the lands proposed for exchange is based on the Biological Assessment for Terrestrial Wildlife Species and the Biological Evaluation for Forest Service Sensitive Species, Pine Creek Land Exchange (Tyers 2009 a & b, Canfield 2011).

Federal Lands

Threatened and Endangered Species

The Grizzly Bear had been listed as threatened in the Greater Yellowstone Area but was delisted in 2007 due to steady increases in population. On September 21, 2009, however, a ruling of the Federal District Court in Missoula, Montana, vacated that delisting and restored the Grizzly Bear to threatened status throughout the Greater Yellowstone Area (Greater Yellowstone Coalition v. Servheen, 07-CV-134-DWM (D. Mt.)). This order responded to a petition that claimed the

bear's status is uncertain for a range of reasons, including decimation of white bark pine. White bark pine seeds are considered an important element of the bear's diet.

The Federal lands considered for exchange are within an area considered occupied by grizzly bears. The habitat of Federal lands, however, is of low quality during all seasons due to its proximity to Gardiner, proximity to occupied housing, road density and lack of security cover.

The Eagle Creek area is located within the Greater Yellowstone Area critical habitat unit for Canada lynx (Federal Register, 2009). The Federal lands in this area, however, are very unlikely to support Canada lynx, due to low elevation and lack of suitable forest on or near the site.

Forest Service Sensitive Species

The gray wolf, bald eagle and peregrine falcon were all previously protected under the Endangered Species Act. As populations recovered, these species were removed from the Endangered Species List ("delisted") and automatically added to the Forest Service Sensitive Species List. Other sensitive species are those identified by the Regional Forester for which population viability is of concern, as evidenced by current or predicted downward population trends, or decline in habitat capability.

Gray wolves are habitat generalists, and make use of a wide variety of habitat types throughout the course of their lives. Management emphasis for gray wolves is directed at maintaining sustainable populations of wolf prey species, primarily ungulates. Maintaining the health and productivity of big game winter range is a key to managing for wolves. Wolves are present in the Absaroka Mountain Range. The Federal lands in Eagle Creek are used as migratory and wintering habitat of big game. These lands do not provide high quality habitat for big game due to fencing, proximity to occupied housing and roads. While gray wolves may move through this area, the Federal lands are unlikely to be used by wolves as essential habitat.

Bald eagles were delisted under the ESA in 2007. They are typically associated with large lakes (80 acres or larger) and major river courses (USDI 1994), and feed primarily on fish and carrion. There are no known bald eagle nests, and no suitable nesting habitat within any of the lands (public or private) identified for exchange. Bald eagles are known to winter along the Yellowstone River Corridor, and may venture into the Eagle Creek drainage in search of carrion on big game winter range.

The peregrine falcon is a predatory bird that feeds almost exclusively on other avian species. Peregrines nest in cliff and rock formations typically associated with hydrographic features such as rivers and lakes. Riparian habitat and open meadows are preferred hunting areas. There are no known peregrine nest sites in the vicinity of the Federal lands proposed for exchange, although there is suitable habitat in the area.

The wolverine is a mid-sized forest carnivore, which tends to occupy habitat at higher elevations in relatively secluded areas. Wolverines occur at naturally low densities throughout their range, and are known to occur in the Absaroka Mountain Range. Although they typically prefer to stay at higher elevations year round, wolverines are capable of long range movements, and will

traverse lower elevation areas during long range dispersals. Wolverines are opportunistic omnivores with a generalist foraging strategy that includes scavenging on carrion, feeding on berries and insect larvae, and direct predation of small, medium and large mammals and birds (Banci 1994:113). Reproductive habitat for wolverines occurs at relatively high elevations, in mature and old growth forest as well as large boulder talus fields and high mountain cirques (Copeland 1996:94-95). The Federal lands proposed for exchange are at lower elevation than that typically used by wolverines. Due to nearby residential development, wolverines are unlikely to use this during dispersal movements.

Bighorn Sheep have recently been listed as sensitive species in the Forest Service Northern Region. Their primary habitat is associated with cliffs, mountain slopes, rolling foothills. They have fidelity to specific home ranges though single animals will move long distances, sometimes crossing intermountain valleys as part of their dispersal mechanism. Minimum snow depth (south facing slopes) is a consistent element of their winter range. Summer range consists of high quality grass and forb communities and escape terrain. Bighorn sheep security needs and predator defense mechanism are met through a quick response escape to cliffs and precipitous terrain and thus their preferred habitat lacks timber or dense vegetative cover. Bighorn sheep are known to occupy the greater Eagle Creek/Jardine area throughout the winter period. The specific Federal lands proposed for exchange however rarely see bighorn sheep due to the human activity and presence and the occurrence of dogs and horses. Bighorn sheep moving through the surrounding area (Blanding Station, Yellowstone River) are expected to continue to use the area as they have in the past, unaffected by the proposed land exchange.

Long-legged myotis is one of western America's most widely distributed bat species. Long-legged myotis are dependent on wooded habitats including pinyon-juniper and other coniferous forests. Their habitat ranges in elevation from 2,000-3,000 m. Maternity roosts have been located beneath bark and in other cavity forming spaces. Most nursery colonies live in crevices and exfoliating bark associated with very large and old trees. Long-legged myotis are found roosting along openings and forest edges, rock crevices, cliffs, and buildings. Foraging occurs over streams, ponds, water tanks and in forest clearings, often on moths (Taylor et al.). This bat species shows some habitat flexibility, utilizing several different forest types, and extending into closed to open canopy forests. Despite habitat flexibility, the species appears selective in roost locations associated with relatively continuous tracts of late successional forest. The exchange of the proposed Federal lands will not result in impact to individuals or Long-legged myotis habitat.

Long-eared myotis are found in wooded and rocky areas (Jones et al. 1973). They have been located hibernating in a mine in riverbreaks habitat in northeastern Montana (Swenson and Shanks 1979) (Montana Field Guide). Their habitat is characterized as forested areas, with broken rock outcrops; also shrubland, over meadows near tall timber, along wooded streams, over reservoirs. Roosts include buildings, hollow trees, mines, caves and fissures. Small maternity colonies of 12-30 individuals have been found in buildings, roosts of reproductive females were in crevices in small basalt rock formations (Rancourt et al. 2005) (NatureServe), and a group of adults and young were found in an uninhabited ranch house in Colorado (Barbour and Davis 1969). Bats may occur in the vicinity, but the exchange of the proposed Federal lands will not result in impact to individuals.

Townsend's big eared bat habitat includes use of caves and abandoned mines for maternity roosts and hibernacula (Worthington 1991, Foresman 2001, Hendricks and Kampwerth 2001); use of buildings in late summer has also been reported (Swenson and Shanks 1979). Habitats in the vicinity of roosts include Douglas-fir and lodgepole pine forests, ponderosa pine woodlands, Utah juniper-sagebrush scrub, and cottonwood bottomland. In hibernacula, ambient temperatures ranged from -1.0 to 8.0 degrees (30 to 46 when torpid Townsend's Big-eared Bats were present) (Hendricks and Kampwerth 2001). Temperatures at maternity roosts are poorly documented; the temperature was 12 degrees (54 in mid-July near a colony in an abandoned mine in Lake County), and 18 degrees (66 in August near a colony in a large and relatively open cave chamber in Lewis and Clark County). Most caves and mines in Montana appear to be too cool in summer for use as maternity roosts. The Townsend's big-eared bat occurs in a variety of habitats, although its distribution is strongly correlated with the availability of suitable roost sites. Snags, bridges and buildings serve as daytime roosts, and wetlands has feeding habitat. The small, grazed wetland on the Federal lands proposed for exchange may be used occasionally by Townsend's bats, but is not an important habitat for the species.

Flammulated owls show a strong preference for yellow pines, particularly Ponderosa, for nesting habitat, although dry, open Douglas fir may be used as well. Flammulated owls feed primarily on invertebrate species gleaned from vegetation, and often select open forested stands with low stem density, as well as forest-grassland ecotones as foraging habitat (McCallum 1994; 22, 24). The open meadow habitat of the Federal lands proposed for exchange is not suitable for flammulated owl.

Black-backed woodpeckers occupy forested habitats that contain high densities of recently dead or dying trees, which provide an insect prey base. Black-backed woodpeckers are typically found in three types of forested habitat: post fire areas that have burned within one to six years, areas with extensive insect outbreaks causing widespread tree mortality, and natural disturbance areas such as wind throw, ice damage or other occurrences that produce patches of dead trees. Of these potential habitat types, recent burns contain the highest concentrations of black-backed woodpecker prey for the longest period of time (USDA 2007a). There are no recent forest fires on any of the lands identified for exchange, and at this time, low to moderate insect activity.

Harlequin ducks nest along remote, swift-moving, clear mountain streams with dense shrub habitat along the stream banks. Breeding habitat is typically located away from concentrated human use areas (Clark et al. 1989:61). Eagle Creek is too close to occupied human housing to be used by Harlequin ducks near the Federal lands proposed for exchange.

Management Indicator Species (MIS)

(Note: MIS were not addressed in the wildlife reports for this exchange).

Big Game Winter Range and Migration Corridors

The Eagle Creek area is centrally located within the winter range of the largest of the elk herds in the Yellowstone National Park ecosystem (Ripple and Larson 2000). The area is also used annually by bison migrating between winter range north of the Park and summer range in the Park (Kilpatrick et al. 2009). The Federal lands proposed for exchange, however, have limited

potential to provide either winter range for elk or migratory habitat for bison. These lands have been fenced since 1971 and thus have been removed from availability to elk and bison.

Non-federal lands

The Non-federal proposed for exchange in the Pine Creek area are primarily steep terrain, with dense Douglas fir and lodgepole pine forest. The area is surrounded by Wilderness.

Threatened and Endangered Species

The Non-federal lands proposed for exchange includes habitat suitable for activity and denning of grizzly bear, recently relisted as threatened (see discussion under Federal Lands). The remote location of the lands and inaccessibility to motorized vehicles is favorable for grizzly bear use.

Canada lynx are considered forest carnivores due to their strong association with dense boreal forest habitats. Prey availability, especially snowshoe hares, appears to be a primary limiting factor for lynx in the Northern Rockies. The main cause of lynx mortality is starvation (USDA Forest Service 2007b: 141). Therefore, lynx habitat conservation measures are currently focused on maintaining adequate quantities of winter showshoe hare habitat.

The Pine Creek area, including the Non-federal lands identified for exchange, is located within the Greater Yellowstone Area critical habitat unit for Canada lynx (Federal Register, 2009). The Non-federal lands proposed for exchange include suitable habitat for Canada lynx.

Forest Service Sensitive Species

The gray wolf, bald eagle and peregrine falcon were all previously protected under the Endangered Species Act. As populations recovered, these species were removed from the Endangered Species List ("delisted") and automatically added to the Forest Service Sensitive Species List. Other sensitive species are those identified by the Regional Forester for which population viability is of concern, as evidenced by current or predicted downward population trends, or decline in habitat capability.

Gray wolves are habitat generalists, and make use of a wide variety of habitat types throughout the course of their lives. Management emphasis for gray wolves is directed at maintaining sustainable populations of wolf prey species, primarily ungulates. Maintaining the health and productivity of big game winter range is a key to managing for wolves. Wolves are present in the Absaroka Mountain Range, and are known to occupy the Non-federal lands proposed for exchange, at least infrequently.

Bald eagles were delisted under the ESA in 2007. They are typically associated with large lakes (>80 acres) and major river courses (USDI 1994:2), and feed primarily on fish and carrion. There are no known bald eagle nests, and no suitable nesting habitat within any of the lands identified for exchange. Bald eagles are known to winter along the Yellowstone River Corridor, and may venture into the Pine Creek headwaters in search of carrion.

The peregrine falcon is a predatory bird that feeds almost exclusively on other avian species. Peregrines nest in cliff and rock formations typically associated with hydrographic features such as rivers and lakes. There are no known peregrine falcon aeries within foraging distance of the Non-federal lands proposed for exchange. The dense forest of these lands is not ideal peregrine falcon foraging habitat.

The wolverine tends to occupy habitat at higher elevations in relatively secluded areas. Wolverines occur at naturally low densities in the Absaroka Mountain Range. Although they typically prefer to stay at higher elevations year round, wolverines are capable of long range movements, and will traverse lower elevation areas during long range dispersals. Reproductive habitat for wolverines occurs at relatively high elevations, in mature and old growth forest as well as large boulder talus fields and high mountain cirques (Copeland 1996:94-95). The non-federal lands proposed for exchange provide suitable foraging habitat for wolverine and are suitably remote from roads and human development to serve as wolverine habitat.

Bighorn Sheep have recently been listed as sensitive species in the Forest Service Northern Region. Their primary habitat is associated with cliffs, mountain slopes, rolling foothills. They have fidelity to specific home ranges though single animals will move long distances, sometimes crossing intermountain valleys as part of their dispersal mechanism. Minimum snow depth (south facing slopes) is a consistent element of their winter range. Summer range consists of high quality grass and forb communities and escape terrain. Summer habitat is available on the specific Non-federal lands proposed for exchange, however rarely are bighorn sheep seen in the vicinity due to the proximity of dense forest and lack of escape terrain. Bighorn sheep will remain unaffected by the exchange of Non-federal lands to public ownership.

Long-legged myotis are dependent on wooded habitats including pinyon-juniper and other coniferous forests. Their habitat ranges in elevation from 2,000-3,000 m. Maternity roosts have been located beneath bark and in other cavity forming spaces. Most nursery colonies live in crevices and exfoliating bark associated with very large and old trees. Long-legged myotis are found roosting along openings and forest edges, rock crevices, cliffs, and buildings. Foraging occurs over streams, ponds, water tanks and in forest clearings, often on moths (Taylor et al.). The species appears selective in roost locations associated with relatively continuous tracts of late successional forest. The Non-federal lands may include potential Long-legged myotis habitat resulting in a positive result given the retention of the natural environment and processes.

Long-eared myotis are found in wooded and rocky areas (Jones et al. 1973). They have been located hibernating in a mine in riverbreaks habitat in northeastern Montana (Swenson and Shanks 1979) (Montana Field Guide). Their habitat is characterized as forested areas, with broken rock outcrops; also shrubland, over meadows near tall timber, along wooded streams, over reservoirs. Roosts include buildings, hollow trees, mines, caves and fissures. The non-federal lands proposed for exchange to the Forest Service may include Long-eared myotis habitat resulting in a positive result given the retention of the natural environment and processes.

The Townsend's big-eared bat occurs in a variety of habitats, although its distribution is strongly correlated with the availability of suitable roost sites. Snags, bridges and buildings serve as

daytime roosts, and wetlands has feeding habitat. While some use of snags on the Non-federal lands proposed for exchange is possible, these lands do not provide good habitat of the bat. The trumpeter swan is the largest waterfowl species in the world. Its nesting habitat includes marshes, shallow lake waters, beaver ponds, and occasionally oxbows or slow-moving river backwaters. Breeding habitat is typically secluded, and must provide a large enough open water body for take-off and landings. Wintering habitat includes slow-moving rivers and streams that remain ice-free and provide emergent vegetation year-round (USDA 1995:15-17). The alpine Non-federal lands proposed for exchange do not provide suitable habitat for trumpeter swans.

Management Indicator Species (MIS)

(Note: no analysis of MIS was provided in the wildlife reports for this exchange)

Big Game Winter Range and Migration Corridors

The Non-federal lands proposed for exchange in the Pine Creek area are located at too high elevation to provide suitable elk winter range or bison migration corridors. These lands range from 8,000 to 8,500 feet above sea level in elevation. Elk winter range is generally considered to occur below 7,500 feet in the area north of Yellowstone Park (Singer et al., 1998) and the range of the northern Yellowstone Park bison herd to occur below 7,300 feet in elevation (Plumb et al., 2009).

3.10 Livestock Grazing (Includes Brucellosis Transmission among Wildlife and Livestock, Issue 2)

3.10.1 Laws, Regulations, Policy and Direction

Domestic livestock grazing is a long-established use of the National Forests and Grasslands, and occurred on many of the lands prior to establishment of the first Forest Reserves in 1891. The first formal regulation of grazing on the newly renamed National Forests began in 1906 with the imposition of grazing fees by Secretary of Agriculture James Wilson as Regulation 25 (Dutton 1953). The Forest Service Manual establishes guidelines for issuing grazing permits on National Forests and Grasslands (FSM 2232).

The Forest Plan (1987) includes provisions for grazing in 21 of its 26 management areas.

In 2000, the Interagency Bison Management Plan (IBMP) was adopted by the National Park Service, Forest Service, USDA Animal and Plant Inspection and Health Service, MFWP, and Montana Department of Livestock. One of the goals of IBMP is prevention of the transmission of brucellosis between wild bison and domestic livestock in Montana, to be implemented in a three-step plan. Although progress on implementing the plan has been slower than anticipated in IBMP (GAO 2008), Montana has maintained a brucellosis-free status since 1985.

3.10.2 Affected Environment

Federal lands

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe (by letter September 22, 2003) regarding the proposed exchange. The parties to the exchange agreed that when the exchange was complete, the Forest Service would terminate the Special Use Permit. However, Wayne Hoppe recently passed away. In view of this unfortunate event, the permit held by Wayne Hoppe will be terminated.

Non-federal lands

The Non-federal lands proposed for exchange are not open to cattle grazing.

3.11 Recreation and Public Access

3.11.1 Laws, Regulations, Policy, and Direction

The A-B Wilderness was included in the National Wilderness Preservation System on March 27, 1978, by an Act of Congress (P.L. 95-249).

The legal designation as wilderness formally recognized and protected wilderness values: extensive intact ecosystems, outstanding opportunities for solitude and primitive unconfined types of recreation, high quality water, air and wildlife resources, unique vegetation and habitats, and other intrinsic values.

The Wilderness Act of 1964

The Wilderness Act of 1964 (P.L. 88-577) established the Wilderness Preservation System "*In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition…"(*Sec. 2 (a)).

The Act further goes on to define wilderness: "*A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in the Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude*

or a primitive and unconfined type of recreation…" and "(4) may also contain ecological, geological or other features of scientific, educational, scenic or historic value." (P.L. 88-577, Sec. 2(a)).

The Act directs each agency administering any area designated as wilderness to *"…be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character" and that these areas "shall be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness and so as to provide for the protection of these areas, the preservation of their wilderness character".*

Section 4 (c) of the Act both prohibits certain activities in wilderness (including road building, use of motorized or mechanized equipment, etc.) and at the same time allows agencies to engage in those activities for administrative purposes *"to meet the minimum requirements for the administration of the area."*

Section 5(a) and (c) of the Act specifically allows ingress and egress to private land in-holdings. The Act directs the Secretary of Agriculture to control such access by *"reasonable regulations consistent with the preservation of the area as wilderness"* and to allow access *"… by means which have been or are being customarily enjoyed with respect to other such areas similarly situated".* The alternative the Act allows to providing adequate access to private in-holdings is to exchange the parcels "*for federally owned land in the same State of approximately equal value under authorities available to the Secretary of Agriculture…"* (P.L. 88-577, Sec. 5(a)).

National Forest Management Act

The National Forest Management Act (P.L. 94-588) directs the Forest Service to consider the coordination and inclusion of wilderness management direction in Forest Plans. Forest Service Manual (FSM) direction elaborates on the minimum requirements for wilderness direction to be included in forest plans. This was accomplished in the Absaroka/Beartooth initially in 1981 when the "Interim Direction for the Absaroka/Beartooth Wilderness" was published, and finally in 1987 when the Gallatin Forest Plan was published. The Gallatin Forest Plan included specific direction for the Absaroka/Beartooth Wilderness in appendix F1 and under management area 4.

Gallatin National Forest Plan

The forest-wide direction for recreation, as stated in Chapter II of the Forest Plan, under "Goals" is to "provide for a broad spectrum of recreation opportunities in a variety of Forest settings". Recreation settings are categorized according to the Recreation Opportunity Spectrum. Specific direction in the Forest Plan relative to this exchange proposal in MA 4 directs to "manage visitor use to prevent loss of solitude or unacceptable degradation of the wilderness qualities" (III-10).

The proposed exchange would increase the primitive recreational opportunities by creating more contiguous wilderness. The Federal lands are currently located in MA 26 with a semi-primitive motorized and non-motorized ROS. This land is also located next to private property that

contains numerous residences. In addition, the Non-federal land is located in MA 4, and under this land exchange, the newly acquired NFS land would be managed in accordance of the Wilderness Act of 1964, to protect the wilderness characteristics and to manage the area for recovery of the grizzly bear. For recreation it would be managed to provide a primitive setting. This land exchange would allow contiguous management of this in-holding and the surrounding area to be held to the same standard within the wilderness and would provide a better opportunity for remote and primitive recreational experience.

3.11.2 Affected Environment

The following summary of recreational potential and access to the lands proposed for exchange is based upon the Proposed Pine Creek Land Exchange: NEPA report for Recreation and Wilderness (Dale 2009).

The affected area includes the A-B Wilderness and lands in the Eagle Creek/Jardine area. Recreational activities in this area include dispersed and developed camping, primitive hiking and camping, snowshoeing, skiing, snowmobiling, hunting, fishing, wildlife watching, motorized use on designated routes, and firewood cutting. One fee campground, Eagle Creek Campground, and two primitive campgrounds, Timber Camp and Bear Creek, are located in the vicinity of this project proposal. Five trailheads (Palmer, Bear Creek, Northfork of Bear Creek, Pine Creek, Little Trail Creek) are located in the vicinity and all provide access into the Wilderness. Motorized use is limited to designated routes, and snowmobiling is restricted to a portion of the lands outside of the Wilderness boundary.

Federal lands

Current recreational uses on the Federal lands to be exchanged include minor non-motorized public access for the purpose of hiking, skiing, snowshoeing, fishing, hunting and wildlife watching and nominal outfitted use. Actual public use is very low, because the Federal lands are fenced and used mainly as a horse pasture under permit. Travel restrictions on this property and surrounding area prohibit dispersed camping and snowmobiling.

Five permitted overnight and day use outfitters are allowed to utilize the Federal lands during the winter, spring, summer and fall seasons as part of their Forest Service permit area. However, since the Federal lands have been fenced under the Livestock Permit since 1971, outfitted use is nominal to non-existent. Fencing provides barriers to movement across the property.

Public recreational use has been very low on this Federal land. There are no designated Forest Service System trails crossing the site or the surrounding area. The Federal land is located in an area that is currently closed (by Forest Service special order) to dispersed camping. In addition, no designated campsites or campgrounds are located on this land. Wildlife watching and hunting are also a minor recreational component as better vantage points can be found on adjacent NFS lands. Winter use is limited to non-motorized activities and snow levels can be very low limiting the type of winter use. Recreational use has, and will continue to be, a very minor component with this Federal land due to its location, non-motorized access and camping restrictions.

The Federal lands are not located in or adjacent to Wilderness.

Non-federal lands

The Non-federal lands proposed for exchange are currently private in-holdings with a designated Wilderness. Although not technically closed to mechanized and motorized transport, as are the surrounding Wilderness lands, the lands are isolated from such uses by surrounding Wilderness. The in-holdings are not currently developed and resemble the surrounding Wilderness lands. Pine Creek Trail No. 627 crosses these lands.

3.12 Threatened, Endangered, or Sensitive Plant Species

3.12.1 Laws, Regulations, Policy, and Direction

The ESA mandates that Federal Agencies such as the Forest Service ensure that any action authorized is not likely to jeopardize the continued existence of Federally listed threatened or endangered species (50 CFR 402 Section 7). FSM 2670.32 requires that the Forest Service avoid or minimize impacts to Sensitive Species.

3.12.2 Affected Environment

The Federal lands proposed were surveyed for sensitive plant species in June 2008. Neither suitable habitat for sensitive plant species, nor occurrences of individuals or populations of such plant species were found during these surveys (Senger & Martell 2008). The Non-federal lands were not surveyed for sensitive plant species.

3.13 Invasive Weeds

3.13.1 Laws, Regulations, Policy, and Direction

The Executive Order for Invasive Species directs agencies to prevent and control the spread of noxious weeds (EO13112, 1999). The Forest Service Manual (FSM 2080) requires that an invasive weeds risk assessment be completed for all projects. The Forest Plan directs the Forest Service to confine present invasive weed infestations and prevent the establishment of new populations (II-28).

3.13.2 Affected Environment

Investigators conducted a focused survey of the Federal lands proposed for exchange in June 2008, and determined that noxious weeds were under control (Senger & Martell 2008). There was no survey for noxious weeds conducted for the Non federal lands. However, several field trips to this the Non-federal lands by Forest Service staff familiar with noxious weeds did not indicate a noxious weeds problem.

3.14 Cultural Resources

3.14.1 Laws, Regulations, Policy and Direction

Section 106 of the Natural Historic Preservation Act requires Federal agencies to consider the potential effects of the action upon historic resources. The Forest Service Handbook for Land Exchanges requires identification of any cultural resources that may potentially be affected prior to executing a land exchange (FSH5409.13, 31).

3.14.2 Affected Environment

A cultural resources investigation of the Federal lands proposed for exchange was completed by the Forest Archaeologist in July 2009. The archaeologist reports: "The area that would go out of federal ownership seems a high probability for the presence of a site. However, a careful inspection revealed no evidence at all" (Allen 2009).

3.15 Visual Quality

3.15.1 Laws, Regulations, Policy, and Direction

The National Environmental Policy Act of 1969 codified the United States' responsibility to use all practicable means to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings" (Section 101 (b) 2).

In 2003, Forest Service Manual Amendment Number 2300-2003-1 revised existing policy on visual quality, establishing a direction of aesthetic and scenery resources inventory and management. The FSM establishes the following Objective for scenic resources: *"To manage National forest system lands to attain the highest possible quality of landscape aesthetics and scenery commensurate with other appropriate public uses, costs, and benefits"* (2380.20). The FSM also makes it Forest Service policy to: *"[e]nsure scenery is treated equally with other resources" (*2380.3).

The Gallatin National Forest will not complete an inventory of aesthetic and scenery resources until the next update of its Forest Plan. Until that time, the current Forest Plan is the guidance document for management of visual resources. That Forest Plan established a Visual Quality Objective (VQO) for each MA (II-16).

VQO is defined as:

> *"A desired level of scenic quality and diversity of natural features based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape".*

Preservation: Only ecological changes are allowed to alter the natural landscape.

Retention: Human activities are not evident to the casual Forest visitor.

Partial Retention: Human activities may be evident, but must remain subordinate to the characteristic landscape.

Modification: Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in middle-ground or background.

Maximum Modification: Human activity may dominate the characteristic landscape, but should appear as natural when viewed as background.

Enhancement: A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists (VI-43-VI-44).

3.15.2 Affected Environment

Federal lands

The Federal lands being considered for exchange have been assigned a single MA: 26. The VQO for MA 26 is Partial Retention, thus evidence of human activities may be evident, but should remain subordinate to the characteristic landscape. The current activity on these lands, horse grazing, requires developed features such as fencing and watering and feeding structures.

Beyond the considerations of visual quality objectives, another consideration of visual quality is the site's prominence from viewing areas. The Federal lands considered for exchange generally occur on low areas of the landscape. They are not prominently visible from any distance.

Non-federal lands

The lands surrounding the Non-federal lands proposed for exchange have been assigned MA 4. The visual quality objective for MA 4 is preservation. These lands, although at comparatively high elevation, are blocked from view of populated areas to the west by a knob of higher terrain.

3.16 Hazardous Materials

3.16.1 Laws, Regulations, Policy, and Direction

The Comprehensive Environmental Response, Compensation, and Liability Act of December 11, 1980, as amended (94 Stat. 2767; 42 U.S.C. 9601, et seq.) requires Federal agencies to identify and disclose the presence of hazardous materials on Federal and Non-federal lands considered in a land exchange. Forest Service guidance for land exchanges requires identification of any concerns related to hazardous materials (5904.13, 31).

3.16.2 Affected Environment

Gallatin Forest staff conducted all appropriate screening for hazardous materials on the all lands proposed for exchange. Although there was evidence of past mining and exploration on the Non-federal lands, no physical or documentary evidence of the presence of any hazardous materials was found (White, 2006).

3.17 County Revenues

3.17.1 Laws, Regulations, Policy, and Direction

Section 102 of NEPA requires that Federal agencies consider the potential impacts of their proposed actions upon the human environment. The regulations implementing NEPA define "human environment" to include social and economic impacts when such impacts are interrelated with the environmental impacts of the proposed action (40CFR1508.14).

3.17.2 Affected Environment

There are two sources of revenue to Park County that are germane to the proposed land exchange: property tax revenues from the Non-federal lands considered for exchange, and Federal Secure Rural Schools (SRS) payments made to Park County for the Federal lands. SRS payments were created by the Secure Rural Schools and Community Self Determination Act of 2000. This law established a funding program to provide transitional assistance to rural counties affected by the decline in revenues from timber sales on Federal lands. Counties had traditionally relied upon a share of the receipts from timber sales to supplement local funding of school system and road costs. The original SRS program was scheduled to expire in 2006, but has twice been extended by Congress, most recently through 2011.

On the Non-federal lands, tax payments to Park County in 2009 totaled $47.82 on approximately 33.23 acres, or approximately $1.44/acre. On the Federal lands, SRS payments to Park County in 2008 totaled $968,645 from 842,082 acres of Federal lands in Park County, or $1.15/acre.

3.18 Appraisals

The Federal lands and Non-federal lands identified for exchange have been appraised in accordance with federal standards.

On January 4, 2010, Forest Service certified appraiser Randall A. Biehl, RPRA, prepared appraisal reports for the Federal lands and the Non-federal lands. On March 4, 2011, these appraisal reports were approved by Kimball Frome, RPRA, Senior Review Appraiser.

The estimated market value of the Federal lands is $171,000. The estimated value of the Non-federal lands is $169,000. These appraisals are valid for one year, or until November 3, 2011.

The proposed land-for-land exchange would be completed on the basis of equal market values.

Lands to be exchanged must be of equal value or equalized by procedures specified in 36 CFR 254.23, specifically, through modification of the exchange proposal, or cash equalization not to exceed 25 percent of the value of the Federal lands.

In the Pine Creek Land Exchange, a cash payment of $2,000 (approximately 1.2% of the value of the Federal lands) would be required from Hoppe to the U.S. to equalize the values and complete the exchange, which is in compliance with the federal regulation.

Chapter 4
Environmental Consequences

Introduction

Chapter 4 provides an analysis of the environmental consequences that would result from implementing either alternative action. The analysis of impacts considers direct, indirect and cumulative effects of implementing each of the two alternatives (No Action and Proposed Alternative, *see also Section 2.4*). Direct effects would be caused by and occur at the same time and place as the initial cause of action (40 CFR 1508.25). Indirect effects (or secondary effects) also would be caused by the action, but occur later in time or are farther removed in distance. Cumulative effects would arise from incremental impacts of the Proposed Action in conjunction with effects of other past, present, and reasonably foreseeable future actions.

4.1. Common Aspects of the Analysis

The analysis of impacts in this section is organized similarly to Chapter 3, discussing impacts to each element of the effected environment in the same order as they are described in Chapter 3. Chapter 4 focuses in greatest detail on those effects related to the important issues identified in Section 2.2, other environmental effects are described briefly. Table 4.1 provides a summary comparison of the alternatives relative to the important issues. These issues relate to wildlife, transmission of brucellosis among wildlife and domestic livestock, and consolidation of NFS lands within the A-B Wilderness.

The analysis area includes the lands considered for exchange in the Eagle Creek and Pine Creek areas and the adjacent lands within one mile. The analysis area may extend beyond the National Forest boundary; particularly the analysis of cumulative effects. Forest Service resource specialists have identified other projects or programs to consider as cumulative actions with this proposal. The general project area and specific analysis areas include Federal, state and privates lands. The cumulative effects analyses consider projects or activities completed or proposed for the period 1995 through 2010.

This EA complies with management direction in the Forest Plan. Forest resource specialists have prepared specialist reports to analyze the important issues and alternatives. The specialist reports are available in the project file.

4.2. Wilderness (Issue 3)

4.2.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Indirect effects to the wilderness resource can be defined as physical and detectable changes to the landscape outside wilderness which would affect wilderness character such as perceived remoteness, opportunities for solitude, natural integrity and apparent naturalness. Indirect effects

can also include changes to the area's setting, including ambiance and sense of place. These changes can be caused by the modification to the landscape such as building construction and road construction.

Under this alternative, no lands would be exchanged between Hoppe and the U.S. There would be no direct or indirect impacts to wilderness or in the Eagle Creek area. The Non-federal lands in the Pine Creek area would remain private in-holdings within the A-B Wilderness.

Direct and Indirect Effects of Proposed Action

The Proposed Action would have an effect on wilderness, however all direct, indirect, and cumulative effects would be positive and benefit the Forest Service and the public with the exchange of the Federal lands for the Non-federal lands in the Pine Creek area.

The proposed Pine Creek Land Exchange would directly increase the amount of wilderness within the A-B Wilderness and would ensure the Gallatin National Forest's ability to manage those lands according to the Forest Management Plan and the Wilderness Act of 1964.

Decreasing private in-holdings within the Wilderness decreases the potential for development within the wilderness boundaries as well as the need to provide access to those private in-holdings. This would directly and indirectly affect the Forest Service's ability to manage wilderness according to its objectives. Indirectly, more intact wilderness has a positive effect on wildlife populations and management of and protection of cultural resources, water resources, and social impacts, as well as the ability to control commercial activities. The Forest Service would be better able to effectively manage towards visual resources, preservation, conservation, and adherence to the Wilderness Act.

The Federal lands to be exchanged are not suitable for consideration as potential wilderness due to small size, proximity to roads, and adjacent development. Their transfer out of NFS status would have no effect on Wilderness resources.

4.2.2. Cumulative Effects

Past, Present and Reasonably Foreseeable Actions and Effects

The Non-federal lands could face development pressures in the future. Although development of these lands would be difficult, the location within a Wilderness Area and in close proximity to Yellowstone National Park, make the land attractive for vacation home development.

Cumulative Effects of No Action

Should the Non-federal land be developed, the wilderness character of A-B Wilderness would be adversely impacted. Additionally, any development would require access via a special use permit, resulting in both the impacts to wilderness of developing a driveway or private road through the wilderness to the in-holding and increased administrative workload to the Gallatin National Forest of granting and administering a new special use permit.

Cumulative Effects of Proposed Action

The proposed exchange is not expected to result in additional impacts to the A-B Wilderness.

4.3. Geology and Minerals

4.3.1. Direct and Indirect Effects

Due to the low potential of finding commercial mineral resources on any of the lands involved in the proposed exchange, there is little potential for impact to geological and mineral resources under either the no action or proposed alternative.

4.3.2. Cumulative Effects

Past, Present, and Reasonably Foreseeable Actions and Effects

No mining activity or other mineral development has occurred in the recent past or is anticipated to occur on or adjacent to any of the lands involved in the propose land exchange.

Cumulative effects

No cumulative effects of either alternative upon geological or mineral resources are anticipated.

4.4. Wetlands, Floodplains, and Riparian Areas

4.4.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

This alternative would not result in any changes in land ownership or management, thus there would be no direct or indirect effects wetlands, floodplains, or riparian areas.

Direct and Indirect Effects of Proposed Action

The Federal lands proposed for exchange include approximately 1.93 acres of shrub wetlands associated with Eagle Creek. There is no developed floodplain along this reach of Eagle Creek. Deed restrictions would prohibit any dredging, filling, channelizing, diking or other management within a 50 foot buffer on either side of Eagle Creek. This restricted area includes all wetlands on the parcel. Please refer to 1.2.4 Deed Restrictions

As summarized above in Section 3.6.2, the proposed exchange would result in a net reduction of approximately 1 acre of wetlands, but no reduction of floodplain area, within NFS jurisdiction. FSM 2527 directs that the value of wetlands and floodplains must be equal in land exchanges.

4.4.2. Cumulative Effects

Past, Present, and Reasonably Foreseeable Actions and Effects

The only recent activity on any of the lands proposed for exchange is some trampling of banks and aquatic vegetation along Eagle Creek on the Federal lands proposed for exchange.

Cumulative Effects of No Action

Under the No Action alternative, grazing would likely continue of the Federal lands along Eagle Creek. If a new special use permit were issued, permit restrictions could require livestock exclusion fencing to prevent trampling of stream banks and grazing of stream bank vegetation. If grazing were eliminated, this impact would also be eliminated.

Cumulative Effects of Proposed Action

The deed restrictions included in the proposed exchange would provide long-term protection of wetlands associated with Eagle Creek from any damage due to development. Grazing impacts to the wetlands would be likely to continue on the lands conveyed into private ownership.

4.5. Fisheries

4.5.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Fisheries Conservation

No lands would be exchanged under this alternative, so there would be no change in ownership. All potential future conservation management options (e.g., implementing a habitat enhancement project, and managing fish populations) would be maintained.

Access to Recreational Fishing

There would be no change in the levels of access to recreational fishing waters under the no action alternative.

Direct and Indirect Effects of Proposed Action

Fisheries Conservation

Due to the small stream size from irrigation dewatering, the reach of Eagle Creek that crosses the Federal lands proposed for exchange has very little value as fisheries habitat. If future Yellowstone cutthroat trout restoration were to be planned for the Eagle Creek drainage, restoration would likely occur in the drainage above Jardine Road where suitable habitat exists. Below Jardine Road, significant irrigation diversions and limited habitat availability would limit any potential for native trout restoration. The culvert under Jardine Road is also considered a barrier to fish passage. Therefore, a reasonable end point for restoration would be the National Forest boundary near the road culvert, which is above the Federal lands proposed for exchange. Therefore, potential for future conservation actions would not be lost under this alternative and the issue is dismissed from further detailed study.

Access to Recreational Fishing

Small stream size, limited access due to dense deciduous vegetation, low fish densities and small fish size throughout the reach of Eagle Creek in the Federal lands proposed for exchange preclude recreational fishing opportunities. Therefore, no recreational fishing opportunities would be lost under the proposed action and the issue is dismissed from further detailed study.

4.5.2. Cumulative Effects

Past, Present and Reasonably Foreseeable Actions and Effects

There are no past, present, or reasonably foreseeable future actions that would influence the effects analysis for either alternative. No cumulative effects to fisheries conservation or recreation are anticipated to result from the implementation of either action.

4.6. Wildlife (Issue 1)

4.6.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Threatened and Endangered Species

No lands would be exchanged under this alternative, and no changes in land management would occur. There would thus be no effects to threatened or endangered species under this alternative.

Forest Service Sensitive Species

Maintaining current land ownership should not adversely affect any sensitive species of wildlife.

Big Game Winter Range and Migration Corridors

Maintaining current land ownership patterns should not affect big game winter range or bison migration in the project area.

Direct and Indirect Effects of Proposed Action

Threatened and Endangered Species

This alternative would transfer approximately 22.48 acres of Federal lands into private status, and allow some private development of this land. While new development could potentially displace wildlife habitat, Canada lynx or Grizzly Bear use of these lands is likely low due to its low altitude and proximity to roads used by motor vehicles.

The Non-federal lands proposed for exchange to the U.S., however, provide habitat likely to be used by both Canada lynx and grizzly bear. Adding these lands to the Wilderness system would benefit lynx and grizzly bear by affording permanent protection to high quality habitat.

Forest Service Sensitive Species

The proposed action is not likely to adversely affect any Forest Service Sensitive species.

Big Game Winter Range and Migration Corridors

The proposed action should not affect big game winter range or bison migration in the area.

4.6.2. Cumulative Effects

Past, Present and Reasonably Foreseeable Actions and Effects

Past, present and reasonably foreseeable future activities that could affect wildlife species include the ongoing white bark pine beetle infestation, which is altering the composition of forest stands throughout many areas of Western Montana via mortality to white bark pine.

Cumulative Effects of No Action

Threatened and Endangered Species

Should development of the Non-federal lands in Pine Creek occur, it would displace occupied habitat of both Canada lynx and grizzly bear.

Forest Service Sensitive Species

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe in writing Sept. 22, 2003 regarding the proposed exchange. The parties to the exchange agreed that at that time the exchange was completed the Forest Service would terminate the Livestock Area Special Use Permit issued to Wayne Hoppe. However, Wayne Hoppe recently passed away. In view of this unfortunate event the permit held by Wayne Hoppe will be terminated.

Should livestock and fencing be removed from the Federal lands identified for exchange in Eagle Creek, the lands would be more available for wildlife use and might benefit some sensitive species, although proximity to occupied human dwellings and roads would limit this effect.

No other cumulative effects to Forest Service Sensitive Species should occur from the No Action Alternative.

Big Game Winter Range and Migration Corridors

The Federal lands proposed for exchange are encumbered by a Forest Service Livestock Area Special Use Permit issued in 1971 to Bill Hoppe's father, Wayne Hoppe. The lands under permit have been used as a horse pasture and contain fencing and other pasture facilities.

The Forest Service notified Wayne Hoppe in writing Sept. 22, 2003 regarding the proposed exchange. The parties to the exchange agreed that at that time the exchange was completed the Forest Service would terminate the Livestock Area Special Use Permit issued to Wayne Hoppe. However, Wayne Hoppe recently passed away. In view of this unfortunate event the permit held by Wayne Hoppe will be terminated immediately.

Should livestock and fencing be removed from the Federal lands identified for exchange in Eagle Creek, the lands would be more available for wildlife use and might benefit elk as additional winter range or be used by bison during migration, but any such use would be limited by the small size of the lands in question and their proximity to occupied human dwellings.

Cumulative Effects of Proposed Action

Threatened and Endangered Species

Conveyance of the Non-federal lands in the Eagle Creek area would protect their occupied habitat for Canada lynx and grizzly bear as part of the larger, contiguous A-B wilderness.

Forest Service Sensitive Species

Other than general benefits of consolidating Federal lands within the A-B Wilderness, this alternative would not have cumulative effect to Forest Service sensitive species. While some new development could occur on the current Federal lands in Eagle Creek that would be conveyed into private ownership, use of those lands by sensitive species is very limited.

Big Game Winter Range and Migration Corridors

The proposed alternative should not affect elk winter range or bison migration in the area.

4.7. Livestock Grazing (Includes Brucellosis Transmission among Wildlife and Livestock, Issue 2)

4.7.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

There would be no change in grazing under this alternative, and no opportunities for domestic cattle to come into contact or proximity to wild bison. No direct or indirect effects to livestock grazing would thus result from the No Action alternative.

Direct and Indirect Effects of Proposed Action

The proposed action would result in transfer of the approximately 22.48 acres of Federal lands into private ownership. This would result in revocation of the livestock grazing special use permit on these lands. The deed restriction would prohibit grazing by intact female and intact male cattle and domestic bison to prevent the potential of exposure of susceptible cattle to brucellosis in wild bison. Please refer to 1.2.4 Deed Restrictions

No grazing is proposed on the Non-federal lands after the exchange.

4.7.2. Cumulative Effects

Past, Present and Reasonably Foreseeable Actions and Effects

Since the very recent passing of Wayne Hoppe, the Forest Service livestock grazing special use permit on the Federal lands in Eagle Creek will be terminated.

Cumulative Effects of No Action

No cumulative effects on cattle grazing are expected to occur from the No Action alternative.

Cumulative Effects of Proposed Action

No cumulative effects on cattle grazing are expected to result from implementation of the Proposed Action.

4.8. Recreation and Public Access

4.8.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Public access and recreation opportunities in the project area would not be affected by the No Action alternative.

Direct and Indirect Effects of Proposed Action

The exchange would provide for public acquisition of approximately 33.23 acres of private in-holdings within the A-B Wilderness. Pine Creek Trail No. 627 crosses these in-holdings, so public recreational access would be secured by the proposed exchange. Consolidating NFS lands within the wilderness would also have the direct effect of providing the wilderness visitor a seamless wilderness experience without crossing onto private lands. This should enhance the wilderness experience for visitors.

Although approximately 22.48 acres of Federal lands would be conveyed to private ownership in this exchange, this would have little effect on access and recreation, as there is currently no public access to the Federal lands, and no recreational activities occur on the lands.
Future use of the Federal lands transferred to private ownership could include construction of two private residences and continuation of ranching activities. Construction of residences would alter the appearance to the lands, but is consistent with other development in the area, including other residences to the south and the Blanding Station, northwest of the parcel.

4.8.2. Cumulative Effects

Past, Present and Reasonably Foreseeable Actions and Effects

Since the very recent passing of Hoppe, the livestock grazing special use permit on the Federal lands in the Eagle Creek area will be terminated.

Cumulative Effects of No Action

Since the livestock grazing special use permit will be terminated, the Federal lands in the Eagle Creek area would be more accessible to the public for recreation. The intensity of any recreational use would likely be low, due to the comparatively small size of the parcel, the absence of developed trails, and proximity of residences nearby.

If the Non-federal lands in the Pine Creek area were developed by a private owner, the wilderness experience of visitors to nearby portions of the A-B Wilderness would be compromised. Additionally, if these lands remain in private ownership, future owners could attempt to close or restrict public access through the property on Pine Creek Trail No. 627.

Cumulative Effects of Proposed Action

Cumulative effects to recreation related to visual impact of potential future development of the Federal lands would be mitigated by a deed restriction limiting residential development to two modest-sized dwellings and prohibiting commercial, industrial, or institutional development.

4.9. Threatened, Endangered, and Sensitive Plant Species

4.9.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Since no changes in land management or ownership would result from the No Action alternative, no effects to threatened, endangered or sensitive plant species would be anticipated.

Direct and Indirect Effects of Proposed Action

No threatened, endangered or sensitive plant species were found during surveys of the Federal lands, so any future private use of these lands should not affect sensitive plants.

4.9.2. Cumulative Effects

No adverse cumulative effects to threatened, endangered, or sensitive plant species should result from implementation of either alternative.

4.10. Invasive Weeds

4.10.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

The No Action alternative should have no effect on the existing levels of weed infestations on Federal lands, described as supporting numerous annual weeds, but having no uncontrolled infestations of noxious weed (Senger and Martell 2008). No infestation of weeds are known or suspected to occur on the Non-federal lands.

Direct and Indirect Effects of Proposed Action

The acquisition of Non-federal lands would not have a direct effect or an indirect effect on invasive weeds. Currently, there are no known weed populations on this land, and the land exchange would not create conditions conducive to their introduction in the area.

4.10.2. Cumulative Effects

No cumulative effects related to weed infestation are anticipated for either alternative.

4.11. Cultural Resources

4.11.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

Evidence of past mining, including adits, a mine dump and the ruins of a miner's cabin is present on the Non-federal lands. Under the no action alternative, these cultural resources would remain unprotected and could be altered by potential land development.

Direct and indirect Effects of Proposed Action

The cultural resources on the Non-federal lands would receive protection from development under this alternative. Under wilderness stewardship, cultural artifacts would be allowed to naturally deteriorate in place. As no cultural resources were found during surveys of the Federal lands, no cultural resources would lose Federal protection under the proposed land exchange.

4.11.2. Cumulative Effects

No cumulative effects would be likely to be associated with either alternative.

4.12. Visual Quality

4.12.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

No direct or indirect effects to the visual quality of the Eagle Creek area would be anticipated to result from implementation of the No Action alternative.

Under the No Action alternative, there would be the potential for a change to the visual quality of the Pine Creek area. The potential change would include development of private homes and new road or driveway construction. The threat of human occupancy and development of the Non-federal lands would be very high because of the privacy assured by the surrounding A-B Wilderness Area and the proximity of the north entrance to Yellowstone National Park.

Development on the Non-federal lands would not be highly visible due to terrain, but would conflict with the Forest Plan Visual Quality Objective of Preservation for surrounding lands. This objective means that only natural ecological processes have affected the view *(*II-16). Any new road, driveways or homes would be evident, and would not comply with the Forest Plan.

Direct and Indirect Effects of Proposed Action

No direct or indirect effects to the visual quality of the Eagle Creek or Pine Creek areas would be anticipated from implementation of the Proposed Action alternative. While some development

would be allowed on the Federal lands upon conveyance into private ownership, any such development would be visually consistent with existing conditions of the surrounding area and consistent with the adjacent Forest Plan Visual Quality Objective of Partial Retention (II-16 and Forest Maps), which allows evident human development.

4.12.2. Cumulative Effects

Cumulative Effects of No Action

No cumulative effects upon visual resources would be anticipated.

Cumulative Effects of Proposed Action

The Proposed Action would provide long-term protection of visual resources on a current in-holding within the Absaroka-Beartooth Wilderness, complementing protections of adjacent lands achieved by Congressional wilderness designation.

4.13. Hazardous Materials

As no hazardous materials are known to occur on any of the lands in the proposed land exchange, neither of the alternatives would affect any hazardous materials.

4.14. Park County Revenues

4.14.1. Direct and Indirect Effects

Direct and Indirect Effects of No Action

The No Action alternative should have no effect on the Park County revenues, as no change of land ownership would occur.

Direct and Indirect Effects of Proposed Action

Under the Proposed Action alternative, approximately 22.48 acres of Federal lands in Park County would be conveyed into private ownership and approximately 33.23 acres of private lands would be conveyed into NFS status. This should result in a modest decrease in revenues to Park County, as tax revenues from private, undeveloped lands in Park County generally somewhat exceed SRS payments made by the U.S. for Federal lands.

4.14.2. Cumulative Effects

Potential construction of two single-family dwellings on the Federal lands proposed for exchange would be allowed by the proposed deed restriction. This would create additional county revenues in the form of additional property taxes on developed properties.

4.15. Other Disclosures

4.15.1. Public Health and Safety

The proposed exchange does not include activities that pose a risk to public health and safety.

4.15.2. Irreversible and Irretrievable Commitment of Resources

An irreversible commitment of resources refers to the use or commitment of a resource that cannot be reversed. For example, nonrenewable resources, such as minerals in ore, would be removed forever during the milling of the ore and would be irreversibly committed. An irretrievable commitment is the short-term loss of resources, resource production, or the use of a renewable resource because of land use allocations, or a scheduling or management decision.

The proposed land exchange does not involve the use of resources so there are no irretrievable commitments. The proposed exchange, however, could be considered an irreversible commitment of the lands involved, as the ownership of lands would change. It would be unlikely that lands conveyed into private status would ever be reincorporated into NFS status.

4.15.3. Possible Conflicts with Other Land Use Plans, Policies, and Controls

Neither of the alternatives described in this EA would conflict with the objectives of Federal, regional, state, or local land use plans, policies, or controls in the project area.

4.15.4. Energy Requirements and Conservation Potential of Alternatives

Implementing the Proposed Action should not require any measurable increase in the use of petroleum products as compared with the No Action Alternative. Although the total acreage of NFS lands would increase slightly through implementing the proposed action, the overall pattern of NFS lands would be consolidated, facilitating efficient administration.

The lands involved in the proposed exchange have low potential for oil and gas production.

4.15.5. Environmental Justice

By Executive Order 12898, as amended, Federal agencies are directed, to the greatest extent practicable and permitted by law, to assure the fair treatment of people of all races, cultures, and income, with respect to the development, implementation, and enforcement of environmental laws, regulations, programs, and policies.

The public involvement conducted for this EA is documented in Chapter 2, Chapter 5, and the Project File.

The environmental consequences resulting from the Proposed Action and No Action alternative are described above in this chapter. No racial, ethnic, or socioeconomic group would bear a disproportionate share of the consequences of the proposed action or the no action alternative.

4.16. Comparison of Environmental Impacts by Issue and Alternative

Table 4.1: Comparison of Environmental Impacts by Alternative

Issue	Issue Name	No Action	Proposed Action
1	Wildlife Habitat: Winter Range and Migration Routes	No direct or indirect effects wildlife to habitat, winter range or migration routes should occur. Cumulative minor impacts to grizzly bear and Canada lynx might occur.	Minor beneficial impacts to grizzly bear and Canada lynx through consolidation of habitat in Federal ownership. No impacts to winter range or migration routes.
2	Brucellosis: Transmission among Wildlife and Livestock	No direct, indirect or cumulative effects to the likelihood of transmission of brucellosis among wildlife and domestic livestock.	No direct, indirect, or cumulative effects to the likelihood of transmission of brucellosis among wildlife and domestic livestock.
3	Consolidation of NFS Lands within Wilderness	No beneficial effects – a private in-holding in the Absaroka-Beartooth Wilderness would remain.	Direct, beneficial impact: National Forest Acquisition of a private in-holding in the Absaroka-Beartooth Wilderness.

Chapter 5
Preparation and Consultation

Introduction

This chapter includes a list of Forest Service staff who participated in the environmental analysis and preparation of this EA; a list of agencies, organizations, and individuals consulted in the process; and a list of individuals and organizations receiving this EA.

5.1. Forest Service Participants

The following agency personnel participated on interdisciplinary team for the analysis of this proposed action, or provided technical, procedural, and administrative assistance.

Name/Title	Contribution
John Slown, Biologist/Planner	Writer/Editor
Gary E. Howard, Project Manager, East Side Lands Zone	Project Manager
Robert Dennee, Leader, East Side Lands Zone	Extensive background preparation
Dan Tyers, Wildlife Biologist	Wildlife and Habitat
Walt Allen, former Forest Archeologist	Cultural Resources
Mark T. Story, Forest Hydrologist	Wetlands and Floodplains
Scot Shuler, Fisheries Biologist	Fisheries and Aquatic Resources
Dessa Dale, former Resource Assistant	Recreation and Wilderness
Kimberly Schlenker, Recreation Specialist	Recreation and Wilderness
Jane Ruchman, Visual Resources Specialist	Visual Resources
Cheryl Taylor, former Water Rights Specialist	Water Rights Analysis
Kenneth B. Hancock, Water Rights Specialist	Water Rights Analysis
Peter Werner, Mining Engineer	Minerals Report
Sally Senger, Forestry Technician	Sensitive Plants
Anne Martell, Forestry Technician	Sensitive Plants
Sally Cifala, Land Law Examiner	Conveyance

5.2. Consultation with Individuals, Organizations, and Other Agencies

The following individuals, organizations, and agencies were consulted in the analysis of this project and in preparation of this EA.

Bureau of Land Management, Branch of Land Resources
Montana Department of Fish, Wildlife, and Parks
Park County Commissioners
Montana Department of Natural Resources and Conservation
US Fish and Wildlife Service
Enterprise Technical Services

5.3. EA Distribution

This EA will be distributed for a 30-day public review and comment period. Comments received during this period will be considered in the selection of the preferred alternative.

Copies of this EA are available for review at: Gardiner Ranger District, 805 Scott Street, Gardiner, Montana 59030

Copies of this EA will be distributed to the following agencies, organizations, and individuals who have expressed an interest in the project.

Senator Max Baucus
Senator John Tester
Congressman Dennis Rehberg
Crow Tribal Council
Governor Brian Schweitzer
Park County Commissioners
Park County Planning Department
Montana Department of Natural Resources and Conservation
Pat Flowers, Montana Department of Fish, Wildlife, and Parks, Bozeman
Karen Loveless, Montana Department of Fish, Wildlife, and Parks, Livingston
Marty Zaluski, State Veterinarian, Montana Department of Livestock
Superintendent, Yellowstone National Park
Ron Shorter, Gardiner Water District
Ron Burke, Mineral Hill Mine
Rocky Mountain Elk Foundation
Julia Page
Bear Creek Council
Sandy Seaton, Black Mountain Outfitters
Warren Johnson, Hell's A-Roarin' Outfitters
National Wildlife Federation
Barb Cesteros, Greater Yellowstone Coalition
Bob Ekey, Wilderness Society
Alan Shaw, Church Universal and Triumphant
Darrell Geist, Buffalo Field Campaign
Jeff Brown, Yellowstone Association
Joe Gutkoski, Yellowstone Buffalo Foundation
Christopher Krupp, Western Land Exchange Project
Bill and Peggy Hoppe, Gardiner
Joe Case, Gardiner
Nancy Loren, Gardiner
Ingred and James Statz, Gardiner
Joan Winters, Gardiner
Wade Laubach, Gardiner

Appendix A
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